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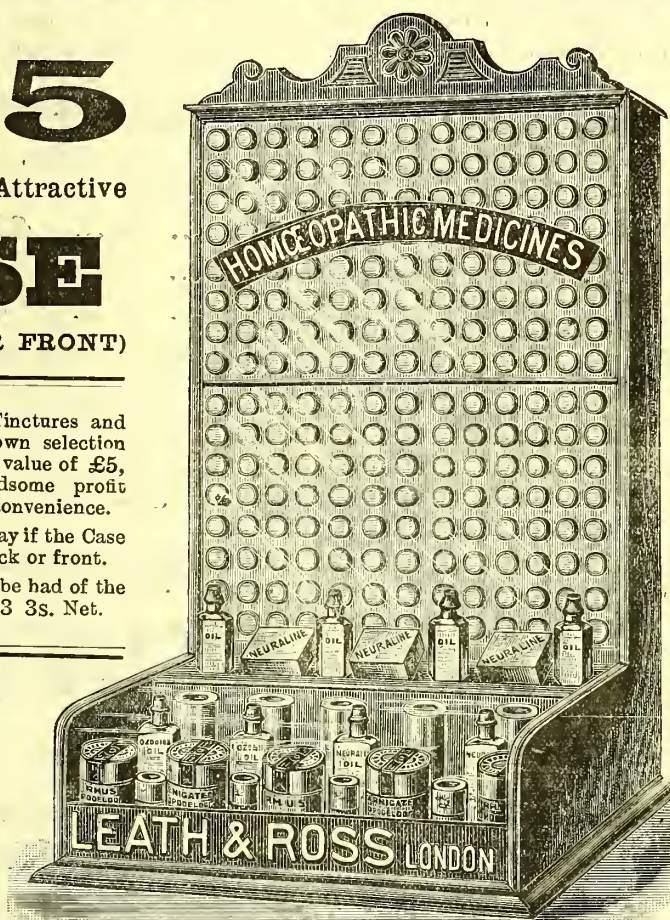
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BRITISH MEDICAL ASSOCIATION.

NEWCASTLE-ON-TYNE MEETING, AUGUST 1, 2, 3 & 4, 1893.

ANNUAL MUSEUM.

Special care has this year been taken to see that the Commercial part of the Museum shall be accommodated in centrally-placed and well-lighted rooms.

For **SECTION A. (FOODS AND DRUGS)** the Examination Hall, in the College of Medicine, has been reserved. This room measures 80 feet by 35 feet, is lighted by windows 14 feet high, and opens directly out of the General Reception Room. Table space will be available at prices varying from 2s. to 3s. per square foot, depending on the position of the table. Applications for space must be made before June 29. *Hon. Sec. for Section A., Dr. GEO. R. MURRAY, 2 Saville Place, Newcastle-on-Tyne.*

MUSEUM CATALOGUE.

From 1,200 to 1,500 copies will be distributed amongst Members of the Association, and prepaid Advertisements will be inserted in it at the following rates:—

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HALF-PAGE	1	10	0
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NOTICE.

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At the Pharmaceutical Examinations held last month, 34 Students of this College were successful:—

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MINOR.	
Mr. G. Barnard	Mr. H. Norrish
" G. A. Broom	" J. E. Nicholson
" E. H. Carr	" O. Parry
" H. Dean	" H. N. Popham
" H. De la Rue	" S. R. Pearce
" W. J. Daniel	" C. E. Pinckney
" R. H. Field	" H. W. Shepherd
" J. Gale	" J. E. Sargeant
" J. Hopkins	" W. P. Saville
" J. E. Jones	" L. A. Williams
" T. James	" C. H. Wilkins
" H. P. Lovatt	" J. W. Wood
" G. H. Martin	" T. Woodward
" F. Major	" F. G. Young

PRELIMINARY.

Mr. D. S. Baker	Mr. J. H. Franks
" A. E. Bower	" J. E. Lincoln

N.B.—The names of the successful Students of this College are published—
1. Because the Principals are proud of the Students they have trained, and of their success at the Examinations.
2. Because a published list of successes furnishes a more reliable guide to intending Students than a mere statement of figures.

For Prospectus, containing full particulars and fees, apply to **E. WALDEN, Secretary.**

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24 NEWINGTON, LIVERPOOL.

Principal—Mr. R. C. COWLEY, Ph.Ch.

THIS School was carried on for many years under the late Mr. WARD, during which time it was eminently successful. Mr. COWLEY, having been under Mr. WARD's personal supervision for some time, and having carefully observed his method of teaching, feels convinced that upon these lines only can the high reputation of the School be maintained. In further proof of this, he has during Mr. WARD's illness, and since while directing the work of the School, been encouraged by the success of so many Students, proving a thorough knowledge of the work required for the examination is imparted.

The curriculum of this School has been submitted to and approved of by the Council of the Liverpool Chemists' Association, who have appointed the following gentlemen to visit the School from time to time, and otherwise control the study:—

Messrs. T. F. ABRAHAM, M. CONROY, F.C.S.,
C. SYMES, Ph.D.

Seven Gentlemen presented themselves for examination at the April Examination. The following five passed:—

Mr. ALFRED JOHNSON	..	..	..	Liverpool.
Mr. J. G. JACKSON	..	..	..	Sheffield.
Mr. T. M. LEWIS	..	..	..	Narbeth.
Mr. R. E. LLOYD	..	..	..	Garston.
Mr. J. PENNINGTON	..	..	..	Wigan.

Students intending to enter for July Examination are advised to enter as soon as possible.

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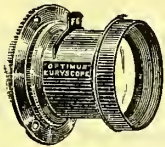
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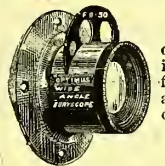
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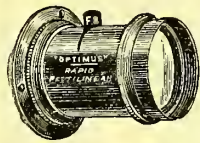
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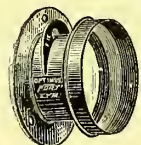
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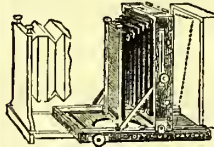
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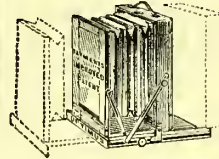


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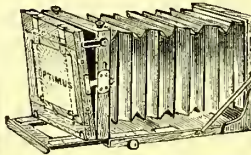


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OF

THE CHEMIST AND DRUGGIST

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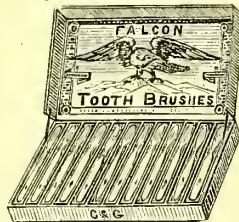
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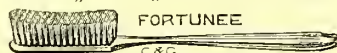
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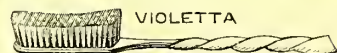
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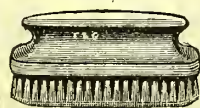


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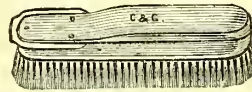
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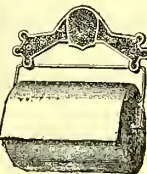


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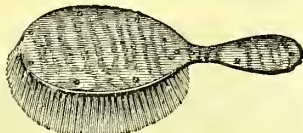


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Postal orders and cheques sent as deposit must be made payable to Edward Halse, and crossed "Martin's Bank (Limited)."

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For sale, 130 well-tryed recipes, neatly copied in book, post, 1s. 6d. Tully, Chemist, Hastings.
Recipes.—Weed-killer, butter-colouring, sheep-dips, 4s. each. 198 8, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Educational.

Offers for Fowne's "Inorganic": quite new; thirteenth edition. 213 38, Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.
Attfield, 5 6; Tanner's "Index of Diseases," 5s.; Muspratt's "Chemistry," 2 vols., engravings and woodcuts, 2022 pages, new, 15s. 6d.; Barlett's "Management of Children in Health and Disease," 625 pages, 4s.; "Pharmacopoeia Universalis," by Jo dan & Rennie, 1440 pages, 7s. 6d.; Ringer's "Therapeutica," 3/9; "Esoteric Anthropology," 2s. 9d.; post free. List of other medical and scientific books on application, useful exchange taken. Bennett, Roper Street, Barrow-in-Furness.

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Gold and silver amalgam, 12s. 6d. oz., usual price 21s. 193 13, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Drugs and Chemicals.

Surplusstock.—7 lbs. cum opii. Tur., P.B., 11s. 6d. lb. Diggs, Chemist, Stourbridge.
Surplus goods.—2 lbs. menthol crystals, 10s. lb.; 4 lbs. opium Tur., 11s. 6d. lb.; 15 oz. ol. santal flv. opt. 1s. oz.; 1 lb. podophyllin resin, 19s. 6d. lb. J. C. Lingdale, Skelton, Cleveland.

Miscellaneous.

Twenty-three inch diameter copper evaporating-dish. Hopwood, Richmond, Surrey.
Edge-runner, granite, in good condition, suitable for drug-grinding, diameter of bed 26 ins. Maddleton, Loughton, Essex.
Perken, Son & Rayment's 7x5 Rapid Landscape Lens (new); what offers? H. H. Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.
Sale or Exchange.—Maw's (fig. 1) counter-scales, 11-in. beam, good condition, stamped, no fault; 1 11s. and 2s. 9d. Newbery's James's fever-powder. Hankinson, Uttoxeter.

Pharmaceutical Journal, 15 vols., half-calf, 1841 to 1856; 6 vols. cloth, 1859 to 1865; also 25 years unbound; offers. Also "Enterprise" tincture-press, cost 13s., for 5s. 6d. Green, Christchurch.

WANTED.

Four or five gross Apollinaris bottles, Blawett, Hayle.
Eight-gall. pear-shaped carboy. Hopwood, Richmond, Surrey.
Tincture-press and syphon bottle-filler, second-hand. Morrish, Argyle Street, Liverpool.
Wall-case, 9 ft. high, 6 ft. wide; also counter and counter-cases. Llewellyn, Ogmores Vale, Glam.
A microscope in good condition, by good maker. Lowest price and particulars to Farret, Chemist, Winslow.
Outside lamp, good condition; price. 203/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.
Set label-drawers, plaster leg, Maw's counter-scales (fig. 4), 10-lb. size; state all dimensions, condition, and lowest price. Hankinson, Uttoxeter.

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SHOWCASE
MAKERS

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40 GRAY'S INN ROAD, HOLBORN
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CHEMISTS' SHOP-FITTINGS, SHOWCASES, and UTENSILS
of all descriptions, new and second-hand.

Chemists commencing, opening Branches, or making alterations, can be fitted throughout immediately, and save 25 per cent. by purchasing from our extensive stock.

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Estimates Free.

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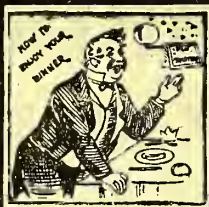
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"Brand - CARLO ERBA."

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It is acknowledged by the Trade that
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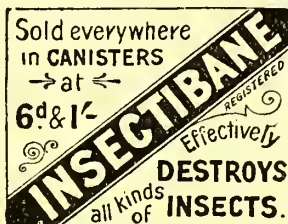
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PRINTED IN COLOURS, and Specially Designed for Chemists' Advertising.

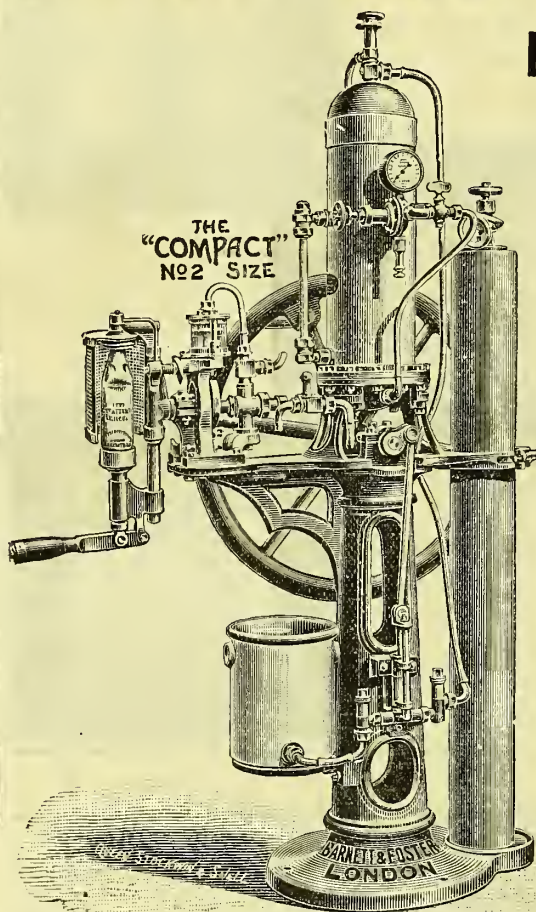
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SODA WATER MAKING

WITH LIQUEFIED CARBONIC ACID GAS.



THE
"COMPACT"
No. 2 SIZE

From Mr. A. THOMPSON, M.P.S., 98 High Street, Putney, S.W.

June 11, 1891.

I am more than satisfied with the "Compact" Machine, which answers my utmost requirements. I have nearly trebled my sale this last three weeks.

I find the waters produced by this Machine far better than I have been able to obtain from any one, being much more saturated with the gas, and the Syphons emptying themselves straight off, without shaking.

From Mr. C. F. WYATT, Chemist, Rochester.

December 16, 1892.

Replying to your inquiry as to "Compact" Soda Water Machine I can only say that I am satisfied with it and the work it does in every possible way. The aeration of the water is perfect, and my customers are now highly pleased with the quality of the goods.

I would also add that beyond the renewal of a few washers, no repairs of any kind have been required since I had it, some fifteen months since.

THE No. 2 "COMPACT" Machine (AS SHOWN).

Producing capacity, by hand, 35 dozens per hour.

PRICE £48.

Or, if fitted for steam, 70 dozen per hour (with an extra filling machine).

NOTE.—Any kind of filling machine can be attached to the "Compact" Machines, EITHER for syphons, Internal Stoppered, Cork, or Screw Bottles.

Iron Vessel containing an average of } 10s.
28 lbs. by weight of Liquefied Gas } each.

And has sufficient Gas to manufacture about 18 gross of highly-charged Soda Water (10-oz. Bottles), or double this quantity of splits.

These Machines occupy little space, and are ready for use immediately! They require no fixing! Are self-contained and produce soda water, lemonade, &c., of the highest class and greatest purity, at a minimum of cost.



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(Title Registered).

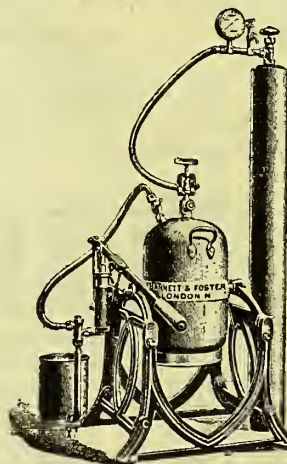
It is the Cheapest, Strongest, Hand-somest, and Best in the World.

Pure Block Tin Tops.

PRICE 1/6 EACH.

Nickel-plating Tops from 3d. each.
Silver-plating Tops from 4½d. each.
Marking on Tops Free for orders of 250. Marking on Vases Free for orders of 1,000.

THE PORTABLE CYLINDER,



Portable Cylinder with Pump fitted to Rocker.

As here shown, is charged with plain filtered water while on the Rocker; the gas from the vessel is then slowly turned on, and the copper cylinder rocked backwards and forwards sharply so as to agitate or mix the water and gas together. When charged to the required pressure (about 110 lbs., shown by the pressure-gauge), it can be removed and attached to the Counter Fountain, or for a filling machine if desired.

Prices.

	£	s.	d.
Six-gallon Tinned Copper Cylinder . . .	5	10	0
Cast-iron Rocker . .	1	2	6
Flexible Pipe, Pressure-gauge, Safety-valve, & Connections . .	3	3	0
If fitted with Pump for pumping the water into the cylinder (and so avoiding waste of gas) extra . .	5	5	0

Prices of larger Cylinders upon application.

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**PURE
CARBONIC ACID GAS**

FOR PRODUCING

**MINERAL AND AERATED BEVERAGES
OF THE HIGHEST QUALITY.**

FREE FROM MINERAL ACID AND OTHER IMPURITIES.

SOME OF ITS ADVANTAGES:—

No Generator required
No Mineral Acids to use
No Whiting or its substitutes
No refuse to get rid of
No choking of sewers
No expensive machinery
No difficulty with present plants

Chemical purity and safety
Freedom from atmospheric air
Vitriol splashing avoided
More perfect aeration
Produces cold during expansion
Simple and cleanly to use
A supply always ready

Saving in Machinery
Saving in Driving Power
Saving in Wear and Tear
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Saving in Time and Trouble
Saving in Materials
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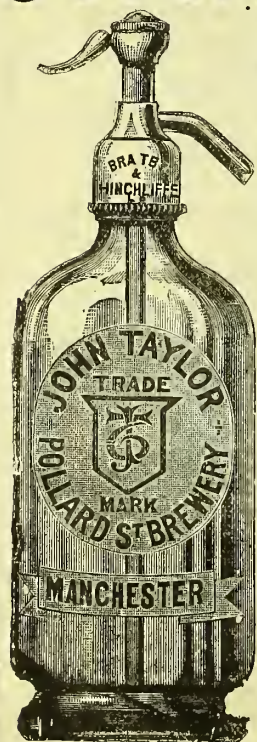
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SEASON 1893.

JEWSBURY & BROWN'S, MANCHESTER,
AERATED WATERS and BEVERAGES. Specially prepared
for a first-class Family Trade. Chemists who have not hitherto
sold these Waters are solicited to apply for Prices and Terms.
Trade Lists, sample Counter Bills, and Analytical Reports will
be sent on application. JEWSBURY & BROWN Pay Carriage
on Waters and Returned Empties.

SYPHONS SELTZOGENES



Messrs. J. BARRE JOHNSTONE & CO., 20 Loftus St. Sydney, N.S.W.
Agents for New South Wales, Queensland, and New Zealand

**SODAWATER
MACHINERY**
AND APPLIANCES
BRATBY & HINCHLIFFE LTD
ANCOATS 146 MINORIES
MANCHESTER LONDON

81 ROBERTSON STREET, GLASGOW.

PRICES.

SYPHONS ... 1/6 1/8 and 1/10 each.

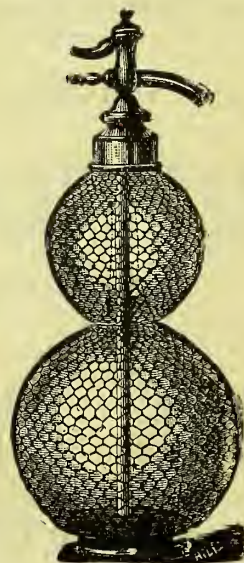
SELTZOGENES.

1	2	3	4	5	8 pint.
5/6	6/2	7/	8/	9/11	15/6 each.

Including two funnels and stopper for charging.

All our Seltzogenes are
manufactured on the well-
known "Fevre" System,
and each one is thoroughly
tested before leaving the
works.

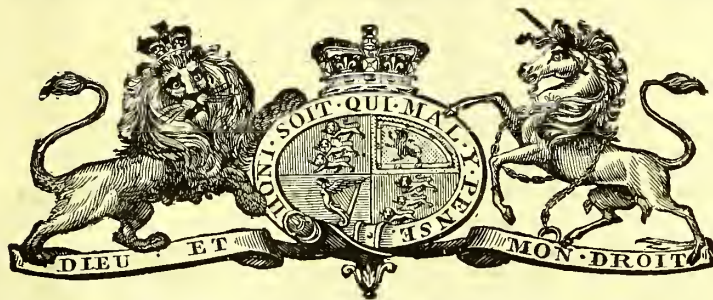
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IDRIS TABLE WATERS

The PUREST and the BEST.

Purveyors
of
Table Waters
by
Royal Warrant



of Appointment
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the
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- IDRIS SODA WATER.** Brilliant, Pungent, and Sparkling.
- IDRIS POTASH WATER.** Prepared according to the British Pharmacopoeia.
- IDRIS SELTZER WATER.** Pure and Delicious Table Water.
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- IDRIS HOP ALE.** Non-Alcoholic.
- IDRIS QUININE TONIC WATER.** A refreshing tonic.
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IDRIS LIME JUICE CORDIAL.

IDRIS PURE LIME JUICE.

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IDRIS PALATABLE LIME JUICE.

IDRIS FRUIT CORDIALS. (20 varieties.)

IDRIS TABLE WATERS IN SYPHONS AND BOTTLES.

IDRIS & COMPANY,

PRATT STREET, CAMDEN TOWN.

By Royal Letters Patent.

The Mawson Filter

THE MAWSON FILTER COMPANY. for Purifying Water. TELEGRAMS: "WEDDELL," NEWCASTLE-ON-TYNE.

PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopoeia.

MOST SUITABLE BASIS FOR QUININE AND OTHER MEDICATED WINES.

A. MILLAR & CO., DUBLIN; and 47 MARK LANE, LONDON, E.C.
OF OF H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

HIRST, BROOKE & HIRST (LIM.), LEEDS, Manufacturing Chemists and Wholesale Druggists, Manufacturers of ORANGE WINE

Of Finest Flavour and Quality, and specially suitable for the Preparation of Orange Quinine Wine.

THE BERKEFELD - NORDTMEYER FILTER.



THE LANCET, September 12, 1891:—
"We have put the Berkefeld Filter through many rigid tests; we have not obtained the slightest evidence which would enable us to contest any of the statements made in regard to this filter."

ADVANTAGES.

Rapid, Perfect, and Permanent
Filtration.
Easy Cleaning and Sterilization.
All Descriptions Supplied.

The Berkefeld Filter Co., Limited, 121 Oxford St., London, W.
LOCAL AGENTS APPOINTED.

STOKES' CASH TILL. REDUCED PRICE 50/-

(Sent on Trial seven days, on receipt of two references).
Particulars and Testimonials on application.

G. R. STOKES & CO., LIM.,
HANLEY, STAFFS.

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MAKERS OF ALL DESCRIPTIONS OF MEDICATED LOZENGES.

B.P., T.H. Ph., and General Proprietary Lozenges. Finest Gum Jujubes and Pastilles—Glycerine and Black Currant, &c. Granular and all other Effervescing Preparations. Boiled Sugars, Floral Tablets (1892).

BEFORE BUYING ANY OF THE ABOVE, PLEASE SEND FOR SAMPLES AND COMPARE.
TELEPHONE NATIONAL 235. TELEGRAMS "GUESTO."

ARE WE IN IT FOR CITRATE OF MAGNESIA?

JUDGE FOR YOURSELVES BY ASKING FOR QUOTATIONS FROM

DUNCAN, FULLER & CO., 150 MINORIES, E.C.

Telephone No. 7547.

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TRADE

“CAMWAL”

MARK.

TOPS THE  TRADE

ONLY PRIZE MEDAL.



LONDON, 1881.

RAISED BY THE
PERSISTENT ENERGY
AND GREAT CARE
OF CHEMISTS

Year	No. of Members	Dividend
1878	119	None
1879	350	None
1880	430	None
1881	540	None
1882	615	3½
1883	708	5
1884	908	8
1885	1,193	8
1886	1,483	8

TELEGRAPHIC ADDRESSES:

Rubine, London.
Chemists, Starbeck, Harrogate.
Camwal, Bristol.

HIGHEST PRIZE MEDAL.



BRADFORD, 1882.

**STRENGTHENED AND
SUPPORTED BY THE
APPROBATION OF THE
MEDICAL PROFESSION**

Year	No. of Members	Dividend
1887	1,612	7½
1888	1,894	5
1889	2,031	7½
1890	2,088	8½
1891	2,163	10
1892	2,312	10%

TELEGRAPHIC ADDRESSES:

Rubine, London.
Chemists, Starbeck, Harrogate.
Camwal, Bristol.

This Company manufactures the various descriptions of Mineral Waters of the highest class and of specified formula, and supplies **ONLY Chemists and Hospitals.**

PRICES.

	In Corked Bots.	In Syphons.							In Corked Bots.	In Syphons.
Carbonated Water	"	1/-	Lime Juice	"	1/8	"	"	"	1/-	2/6
Soda	"	1/-	Ginger Ale	"	1/8	"	"	"	1/-	2/6
Soda	B.P. 15	1/-	Ginger Beer, Glass	"	1/8	"	"	"	1/-	2/6
Peach	"	1/6	Leah's, B.P., 5 grains to Half-pint	"	1/8	"	"	"	1/8	2/6
Peach	B.P. 15	1/-	Iron and Quinine Water	"	1/8	"	"	"	1/8	—
Seltzer	"	1/-	Mineral Acid ..	"	1/8	"	"	"	1, 6	—
Lemonade	"	1/-			2/6					

Syphons, 24s. per dozen. Cases—3 dozen 3s. 6d.; 4 dozen 4s. 6d.; 6 dozen 5s. 6d. each. Empties allowed for at same prices.
3d. per dozen charged extra for the delivery of Syphons in London.

SYRUPS.

In 28-oz. bottles, handsomely labelled and capsuled. Raspberry, Strawberry, Cherry, Red Currant, Black Currant, Pine Apple, &c., 8/- per dozen. Lime Fruit Cordial, 6/6 per dozen. Bottles charged 1/- per dozen, and allowed for on return.

A holder (Chemist) of £1 share is entitled to all the advantages of this Association.

SAMPLE CASE OF WATERS SENT FREE.

Handbills with Name and Prices supplied gratis to Shareholders.

The Chemists' Aerated and Mineral Waters Association, Limited,
LONDON, HARROGATE, & BRISTOL.

"ROSBACH" TABLE WATER

(Concession of HERTZ & COLLINGWOOD.)

Sparkling, delightful beverage. No Salty taste. Excellent by itself, and admirable mixed with milk, malt extract, wine, or spirits.

SAMPLES FREE TO THE MEDICAL PROFESSION THROUGH CHEMISTS.

ROSBACH WATER CO.,
4 Sussex Place, London, E.C.

ROSBACH & FRANZ JOSEF CO.,
347 Fifth Avenue, New York.
And of INGRAM & ROYLE.

"FRANZ JOSEF" WATER.

(HERTZ & COLLINGWOOD'S Concession.)

Natural Aperient. Strongest in the cathartic salts, and, fortunately, it happens to be not unpalatable.

ELEGANT SHOW CARDS FREE TO CHEMISTS.

BURROUGHS, WELLCOME & CO.,
Snow Hill Buildings, London, E.C.

ROSBACH & FRANZ JOSEF CO.,
347 Fifth Avenue, New York.

And of INGRAM & ROYLE.

"LEVICO" WATERS.

(Concession of HERTZ & COLLINGWOOD.)

Natural Arsenio Ferric Water. Two strengths (the mild and strong). In "Health Springs of Germany and Austria," Dr. Buckland writes of LEVICO: "It has been found very useful in Chlorosis and Anæmia due to Hæmorrhage, Wasting Diseases and Malaria, in Scrofula and Syphilis, in Chronic Eczema, Lichen Planus, and Lichen Ruber."

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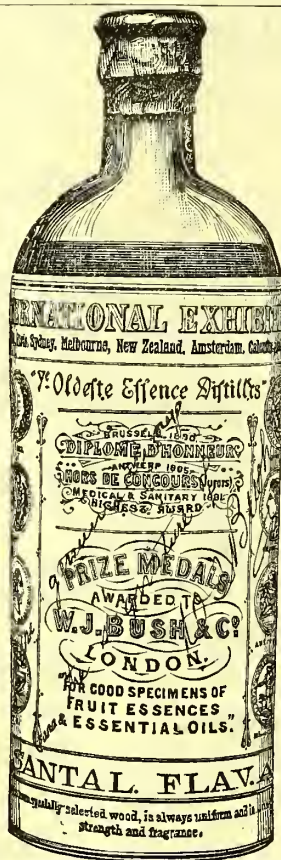
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PHARMACOPŒIA

ESSENTIAL OILS

Packed in Original 1-lb. Bottles.

Ol. Anisi Ang.
Ol. Amygd. Essent. Ang.
Ol. Anethi Ang.
Ol. Anthemid. Ang.
Ol. Carui Ang.
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Ol. Cinnam. Ver. Ang.
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ALL OWN DRAWING.

Ol. Bergamot., Extra
Ol. Eucalypti, Extra
Ol. Lavand. Flor., Extra
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DIRECT IMPORTATION.
SPECIALLY SELECTED.

It is imperative that Chemists and others requiring Essential Oils for Medicinal purposes should purchase genuine and finest qualities only. These can only be obtained from W. J. BUSH & CO., who supply them as above, in 1-lb. Bottles, and guarantee their quality and purity. Nearly all Essential Oils offered in the Market are Impure.

W. J. BUSH & CO., MANUFACTURING CHEMISTS
DRAWERS OF ENGLISH ESSENTIAL OILS,
18 ARTILLERY LANE, LONDON.
Works—ASH GROVE, HACKNEY.

"DORINA" NURSERY BISCUITS

Every
Chemist
is invited
to send for
FREE FULL-SIZE
SAMPLE TIN.

"They possess distinct
nutritive value."—*The
Lancet*.

"We can recommend
them to the notice of
the profession."—*British
Medical Journal*.

SUPPLIED TO CHEMISTS,
1/2 Tins, 10/6 per dozen.
Wholesale of all Wholesale Houses.

Manufacturer: H. B. CHIBNALL,
HAMMERSMITH, LONDON, W.



SEASONABLE ARTICLES.

LIME JUICE CORDIAL. LIME JUICE CORDIALETTE.
LEMON SQUASH.

All these articles are popular summer beverages, and are put up in suitable bottles attractively finished off.

	CORDIAL.	CORDIALETTE.	LEMON SQUASH.
Reputed Pints, per doz.	4/6	4/-	4/6
Quarts	7/3	6/3	7/3
Per Gallon	2/-	1/8	2/-

PURE WEST INDIA LIME JUICE (Filtered Bright).

GRANULAR EFFERVESCENT CITRATE OF MAGNESIA. Per cwt., 70/- and 77/-.

EFFERVESCENT SUMMER SALINE. Per cwt., 85/- 8-oz. bottles, 6/9; 16-oz. bottles, 12/- per dozen.

PERSIAN SHERBET (Lemon Kali). Per cwt., 40/- and 44/-.

Prepared under the superintendence of a duly qualified Analytical Chemist.

CHAS. SOUTHWELL & CO., Dockhead, LONDON, S.E.

ONE BY ONE!

PASCALL'S SILVER CACHOUS
BRILLIANTLY POLISHED.

FRAGRANT AROMA.

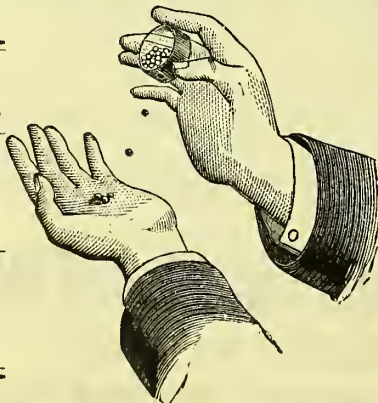
FINEST IN THE MARKET.

IN ROUND PATENT BOXES, MADE TO RELEASE ONE BY ONE.

QUITE
NOVEL

PREFERRED
TO ALL
OTHERS.

In 1 dozen
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Boxes.



Most
Saleable

2/3
per dozen.
In
1-lb. Bottles
3/6
per lb.

Of the usual Wholesale Houses, and of the Manufacturer,

JAS. PASCALL, Blackfriars Rd., LONDON, S.E.

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., & 2s. each.

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The Best in the World. 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., & 1s. each.

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s., and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK.

Painting Stoves, Grates, Iron, Tin, &c. 6d. & 1s. Bottles.

GOODALL'S LAVENDER WATER.

Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

GOODALL'S PLATE POWDER.

Polishing and Cleaning all Metals. Boxes, 6d., 1s., and 2s.

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In 1-pint, 1-pint, and Quart Boxes, 3d., 6d., and 1s. each.

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DRUGGISTS' SUNDRIES.

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MANUFACTURING PHARMACEUTICAL CHEMISTS.

PHILADELPHIA, U.S.A.

LONDON, E.C.: 30 SNOW HILL.

We were the **FIRST** to introduce to the Pharmacist and the Medical Profession, a line of

COMPRESSED PILLS (OR POWDERS)

We are the **LARGEST** Manufacturers of this line of products.

The Machinery and appliances connected with our compressing department are Marvels of Perfection and Accuracy, and the Products wonderful in their Accuracy, Beauty, Style of Finish, Ready Solubility, and Permanency. We use only the **PUREST MATERIAL**. The closest attention is given to every detail of manipulation, and the whole process is under the supervision and direction of the highest commercial integrity, thus ensuring the **SUPERIORITY** of our Preparations.

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WYETH'S BEEF JUICE AS WELL AS

WYETH'S DIALYSED IRON

WYETH'S ELIXIR DIGESTIVE FERMENTS

WYETH'S GLYCEROLE CHLORIDE OF IRON

Are being presented to the attention of the Medical Profession by means of personal interviews, samples and literature, and Advertisements in the Medical Journals. They are being prescribed by Physicians and ordered by Hospitals, and should be found in stock in every well-appointed Pharmacy.

NOTE That all Labels of Wyeth's Pharmaceutical Preparations bear the full firm name and address, "JOHN WYETH & BROTHER, PHILADELPHIA, U.S.A.," and the name and address of the Resident Representative, "WILLIAM F. HORTON, 30 Snow Hill, LONDON."

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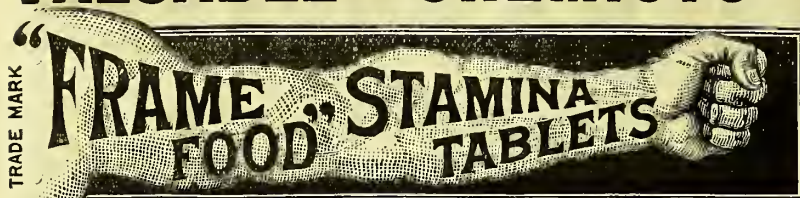
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VALUABLE CHEMISTS' NOVELTY!



SUSTENANCE IN PARVO.
A MEAL
TO BE CARRIED IN THE
WAISTCOAT POCKET.

INVALUABLE for CYCLISTS, TRAVELLERS, ATHLETES, and for all who require a temporary substitute for a regular meal. The specially sustaining qualities of these Tablets are due to "Frame Food" Extract, containing 10 per cent. of Soluble Wheat Phosphates, which nourish Frame, Brain, and Blood.

Dr. NANSEN, after careful examination, has ordered a quantity of "FRAME FOOD" STAMINA TABLETS for the equipment of his forthcoming expedition to the NORTH POLE.

Sold by Chemists, Grocers, &c., in 6d. and 1/- Boxes. Sample Box sent post free for 6 stamps by

FRAME FOOD COMPANY (LIM.), LOMBARD ROAD, BATTERSEA, LONDON, S.W.

BRAND & CO.'S MEAT JUICE.

B. & CO. beg to call the attention of their numerous friends and the Trade generally to the above article, recently introduced by them, the essential feature of which is the juice of the finest English Meat in its natural state, embodying a fine aroma and flavour, and containing the albumen uncoagulated, together with the other nutritive properties, ready for immediate assimilation.

In Bottles, Wholesale, 28/- per doz. Handsome Tablets free on application to

BRAND & CO., MAYFAIR, W.

BOVRIL,

THE GUARANTEED PRODUCT OF PRIME OX BEEF.

WHOLESALE PRICE—
12/6 & 21/6,
LESS USUAL DISCOUNT.

INVALID BOVRIL

SPECIALLY PREPARED FOR INVALIDS.

SOLD ONLY BY CHEMISTS.

RETAIL PRICE—
1/3 & 2/-
PER POT.

50 times more Nourishing than Meat Extract or Beef Tea.

NESTLÉ'S FOOD.

AN ENTIRE DIET FOR INFANTS.

Supplies all the elements necessary for the complete nourishment and growth of the human frame.

Nestlé's Food, being partly composed of milk, is complete and entire in itself, and requires simply the addition of water to make it instantly ready for use. It is not merely an auxiliary, like other Infants' Foods, which require milk to be added in preparing for use.

Recommended by the highest medical authorities as the nearest equivalent to **MOTHERS' MILK.**

Pamphlet, with Medical Testimonials, with sample sufficient for a fair trial, sent post free on application to

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SILVER MEDAL.

	Per gross.	Extra Quality.		Per gross.	Extra Quality.
1d. Sample Bottles, dozen parcels	5/3	6/3	1/2 Bottles, flat or round, repented 1 pints	16/-	26/-
1d. " 1-gross boxes	5/9	6/9	1/2 " " " pints	28/-	38/-
1d. Giant " dozen parcels	6/8	8/6	1 Pint "Imperial", round stoppered bottles	52/-	62/-
" " 1-gross boxes	7/-	9/-	12 1/2 Gallon Casks (casks free) ..	20/-	32/-

ROYAL CAFE SAUCE, a Rich Fruity & Exquisite Flavour.

Square Glass Stoppered Bottles, containing nearly 1/2 pint Imperial, 42/- per gross.

Sample Bottles at 7/- per Gross.

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PEPSALIA.

The New Improved and Perfected Style. White and Odourless.

Guaranteed to keep good indefinitely in all climates.

1/- size	Per dozen, 10/-	Per gross, 105/- net.
2/- " "	20/-	210/- "
5/- " "	50/-	525/- "

PUMILINE.

Essence 1/6	Per dozen, 15/-, less 10 per cent.	Liniment 1/9	Per dozen, 20/-, less 10 per cent.
" 2/6	24/- " 10 "	Jujubes 1/1	10/6 " 5 "
Extract 1/-	9/- " 10 "	" 2/3	20/- " 5 "
Ointment 1/1 1/2	11/- " 10 "	Dry Inhalers, complete 1/6	14/- " 10 "
" 2/9	27/- " 10 "		

G. & G. STERN, 62 Gray's Inn Road, LONDON W.C.

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The "MEDICAL PRESS AND CIRCULAR":—
"Certainly this preparation is of delicate flavour. . . It is perfectly soluble. . . the small quantity required for the immediate production of a cup of excellent cocoa will ensure for the 'Elect Extract' a favourable reception at the hands of persons of weak digestion, and all who prefer this wholesome beverage to tea and coffee."



The "BRITISH MEDICAL JOURNAL" says:—

"Rowntree's Cocoa Extract is one of the best. Its flavour and aroma are good. Cocoa thus prepared is one of the most digestible articles of food."

YORK, ENGLAND.



ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,
Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

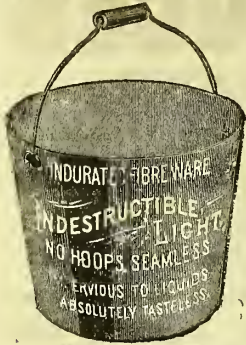
ROBINSON'S ORANGE WINE.

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

INDURATED WOOD FIBRE PAILS

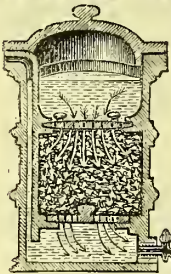
It has no HOOPS to LOOSEN and DROP or RUST OFF.
Being Seamless, BOTTOM WILL NOT FALL OUT.
Will not SHRINK or SWELL.
It is lighter than a Wooden Pail, and WILL NOT SOAK and THUS BECOME HEAVIER.

Per dozen, 21/-.

Warranted to outlast all others, and to be the best ever put upon the market.

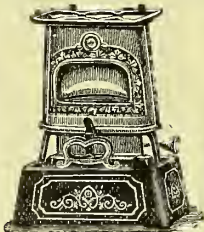
A PERFECT PAIL.**GEORGE CHEAVIN'S**

World-renowned Patent Removable Plate

RAPID WATER FILTER

Cheavin's Filter affords a certain protection against the dangers that lurk in the domestic water supply. Guaranteed to remove all Germs of Cholera, Typhoid, Diphtheria, and all causes of Blood-poisoning, &c.

Lowest Prices guaranteed.

SEND FOR FULL LIST.**THE "PRINCESS MAY" OIL STOVE**

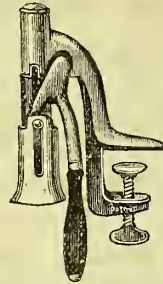
This is a new pattern, and thoroughly reliable Oil Stove. The combustion and illuminating qualities are of the first order.

Each, 2/3. If 1 doz., 2/7. If 1 gross, 2/6.
Free delivery from Works of 2 doz. and upwards.



100-Bar Cases... .. 25/-
50-Bar Cases... .. 15/-
48 Half-bar Counter Boxes... .. 6/3

If any difficulty in obtaining in any part of the world, write
Sole London Consignees—

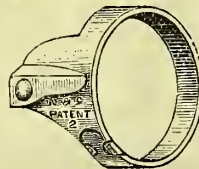
"FORDHAMS, LONDON."**"RAPID" CORK PULLER**

It is the best and most complete Machine made for Extracting Corks.

In pulling corks you never break a bottle, as the strain is on the strongest part of the bottle.

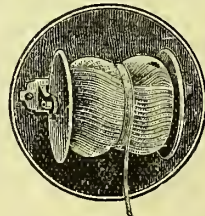
You can cut the wires and pull the cork of a Bass's Ale or any Mineral Water Bottle with one motion of the hand.

Price 12/- each.

The "LIGHTNING"**STRING CUT**

To be worn on the first finger of the left hand. The wearer is able to cut twine or string from any position. If once used will become indispensable to Counter-men, Warehousemen, and all users of strings and twines.

Made in 6 sizes. Price per doz. 8/-.

THE "CARDOC" REELS

Winds from the outside. No Waste. No Ravel. Fits any Ball.

4 oz. 8 oz. 16 oz.
11/9 14/6 19/ doz.

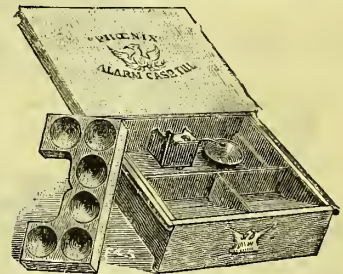
More Popular than Ever.

Facsimile of Show Card, which can be had free on application. It helps to draw attention to the Only Real Beetle Trap.

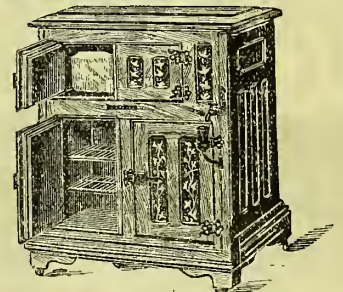
All Merchants will supply.

CATCH THOUSANDS Where other Traps fail.

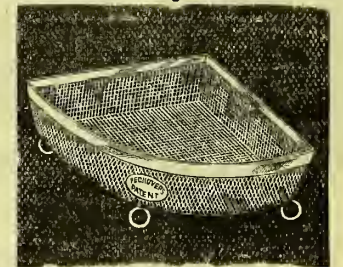
8/6 per dozen.

**THE "PHENIX" CASH TILL**

A perfect day safe. Worth many times its cost. Of all Dealers at 10/6 each.

REFRIGERATORS

The "ALASKA" does not require cleaning. It is so perfectly and scientifically constructed that the Cold Dry Air, by its constant circulation, keeps it sweet and clean. Send for Price List illustrated.

Patent 'Sanitary' Sink Baskets

Enamelled White, 12/- per dozen.

Stands in corner of Sink over Waste pipe, and retains all solid matter from water thrown into it. Ensures Clean Waste Pipe. No Smells—Sink Flooding Prevented.

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KING'S CROSS,

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Bailey's Toilet Co.
Beecham, T.
Bromley, H., & Co.
Dorothy Dentifrice Co.
Hansou, O.
Jewsbury & Brown
Lakeman, J. J.
Quelch, H. C.
Robertshaw & Co.
Stevens, P. A.
Sutton, O., & Co.
Thompson & Capper
Warrick Bros. | Wilson, A.
Wilson, A.
Woods, W. (Areea Nut)

DISINFECTANTS
Blyton, Astley & Co.
Brooks, T.
Calvert, F. O., & Co.
Drysedale, J. W., & Co.
Dusseke Bros. & Co.
Eureka Manufacturing Co.
Fletcher Bros. & Co.
Government Sanitary Co.
Grindley & Co., Lim.
Jeyes' Sanitary Compounds Co.
Mackey, Mackey & Co.
Mason, C. E., & Co.
May & Baker, Lim.
National Chemical Co.
Sanitas Co.
Seahury & Johnson
Tyrer, T., & Co.

DOG MEDICINES
Spratt's Patent, Lim.

DRUGGISTS' SUN.
Ayrton & Saunders
Bailey, M., & Co.
Barclay & Sons, Lim.
Beauletto Co.
Bush, H. W., & Co.
Chemists' Association, Lim.
Chemists' Mineral Water
Association, Lim.
Crowden & Garrod
Evans, Lescher & Webb
Evans, Sons & Co. (Savars)
Fordham, W. B., & Sons, Lim.
Gilbertson, H., & Sons
Hoskins, Wilson & Co.
Jdris & Co. | Kay Bros., Lim.
"Lungili" Co.
Mace & Haldane
Maw, S., & Son & Thompson
May, Roberts & Co.
Newbery, F., & Sons
Quelch, H. C.
Sanger & Sons
Sanitary Wood-wool Co., Lim.
Schulze & Co. | Taite & Co.
Tidman & Son | Toogood, W. O.
Tyrer Rubber Co.
Warne & Co.
Wood, Vincent | Young, J.

DRUG MILLS
Burroughs, Wellcome & Co.

DRYSALTERIES
Browning, J. H., & Co.
Burton, W., & Sons
Crawshaw & Co.
Hatriek & Co., Lim.

EAU DE COLOGNE
Farina, J. M.
Hoskins, Wilson & Co. (Farina)
Martin, Maria (Nun)
Muenich, Oscar, & Co.
Muenich, F.

ELECTRIC APPAR.
Dartford, F., & Co.
Gent & Co. | Orme & Co.

EMEROCATION
Evans, Sons & Co.

ENEMAS
Barclay, Sons, Lim.
Evans, Sons & Co.
Sanger & Son

ENGRAVERS
Corsan, J. R.

ESSENCES
Boehm, Fredk.
Boulton, J., & Co. (Lim.)
Brady & Hinchliffe, Lim.
Burgoyne, Burdighes & Co.
Bush, W. J., & Co.
Fletcher, Fletcher & Stevenson
Goodall, Backhouse & Co.
Hay, W.
Loris & Co.
May & Baker, Lim.
Meadowcroft & Son
Newhall & Mason
Rylands, Dan, Lim.
Stevenson & Howell
Tyrer, P. (Anchovies)
Tyrer, T., & Co.
Woolley, Sons & Co.

ESSENTIAL OILS
Allen, Stamford & Sons
Boehm, Fredk.
Bush, W. J., & Co.
Clay, Dod & Co.
Cocking & Co. (Japan Pepper)
Dodge & Olcott (mint)
Dore, J. H. L.
Evans, Sons & Co.
Hedgkissons, Treacher & Clarke
Lewig, M.
May & Baker, Lim.
Meadowcroft & Sons
Ransom, W., & Son
Schlesinger, L.
Sozio & Andrioli
Stevenson & Howell
Symes & Co.
Treat, R. C.
Vost, G., & Co.
Warrick Bros.
Witrofsky, E.
Wright, Layman & Umney

ETHER
Duncan, Flockhart & Co.
Howards & Sons
May & Baker, Lim.
Robbins, J., & Co.
Tyrer, T., & Co.
White, A., & Sons
Woolley, Sons & Co.
Wright, Layman & Umney

EUCALYPTUS
Bickards
Drysedale, J. W., & Co.
Evans, Lescher & Webb
Fletcher, Fletcher & Stevenson
Grimwade, Ridley & Co.
Laughland, Mackay & Baker
Murdoch, J., & Co.
Tasmanian Eucalyptus Oil Co.
Vost, G., & Co.
Woods & Co.

EXALGINE
Kuhn, B.

EXTRACT MEAT
Brand & Co.
Bush's Liquid Beef
Idrie & Co. (Viking Co.)
Liebig Co.
Liquor Carnis Co., Lim.
Mason, G., & Co., Lim.
Wyeth, J., & Brother

EXTRACTS, FLUID
Allen & Hanbury
Anderson & Co.
Burgoyne, Burdighes & Co.
Evans, Sons & Co.
Fletcher, Fletcher & Stevenson
Hearon, Squire & Francis
Hooper, B., & Co.
Lloyd, T. Howard & Co.
Moss & Co.
Potter & Clarke
Vost, G., & Co.
Wright, Layman & Umney

FEEDG BOTTLES
Burroughs, Wellcome & Co.
(Thermo Safe)
Chemists' Association, Lim.
Evans, Sons & Co.
Hearn, E. A., & Co.
Hoskins, Wilson & Co.
Kilner Bros. | Lynch & Co.
Marriott, E., & Co.
May, Roberts & Co.
Maw, S., & Son & Thompson
Spence & Co.

FILTERING
Berkefeld Filter Co.
Fordham, W. B., & Sons, Lim.
Silicified Carbon Filter Co.

FILTERS
Mawson Filter Co.

FLESH GLOVES
Pattison, G.

FLY PAPERS
Ford, Shapland & Co.
Strong, Christy
Tunbridge & Wright

FOOD (Infants' & Invalids)
Allen & Hanbury
Benger's Food
Brand & Co.
Chibnall, H. B.
Evans, Sons & Co.
Frame Food Co., Lim.
Goodall, Backhouse & Co.
Hearon, Squire & Francis
Idrie & Co.
Liebig Co.
Liquor Carnis Co., Lim.
Mason, G., & Co., Lim.
Nestlé, H.
Ridge, Dr.
Vost, G., & Co.

FORMULA
Kohn, T.

GINGER ALE
Mills, R. M., & Co.

GLYCERINE
Blyton, Astley & Co. (Pastilles)
Boehm, F. | Fink & Co.
Fuerst Bros.
Greiff, R. W., & Co.
Price's Candle Co., Lim.
Watson & Sons

**GOUT & RHEU-
MATIC PILLS**
Bromley, C.
Gee, Geo. (Blair's)

GRAMULAR PREP.
Blyton, Astley & Co.
Evans, Sons & Co.
Hearon, Squire & Francis
Lloyd, T. Howard & Co.
Wright, Layman & Umney

GUM
Pink & Co. (Arabic, &c.)
Greiff, R. W., & Co.
Levermore, Aug., & Co.
Van der Lel, Simpson

HAIR PREP.
Anglo-American Drug Co.
Lim.
Chesebrough Co.
Edwards & Co.
Finchett, H. P., Lim.

HERBS
Newhall & Mason
Potter & Clarke

HERB BEER EXTS
Newhall & Mason
Potter & Clarke

HOMEOPATHIC
Epps & Co.
Keele & Ashwell
Leath & Ross
Thompson & Capper
Watson & Wates

HYPOPHOSPHITES
Duncan, Flockhart & Co.
Fellows
Fletcher, Fletcher & Co.
Symes & Co.
Tyrer, T., & Co.

INDIARUB. GOODS
Tyrer Rubber Co.
Warne, W., & Co.

INHALERS
Burgoyne, Wellcome & Co.
Hoskins, Wilson & Co.
Krohne & Seemann
Spinoe, Co., The
Toogood, W.

INK [See MARKING INKS]
Bewley & Draper

INSECTICIDES
Rocke, Tompsitt & Co.
Steiner & Co.

INSURANCE
London and Lancashire Fire
Insurance Co.

IRISH VELS
Warren, A., & J.

KETCHUP
Tyrer, P.

KOLA PREPRTN
Christy, T., & Co.

LARD
Ewen, J., & Sons

LINT
Liverpool Lint Co.
Maw, S., & Son & Thompson
Newsome, C.
Robinson & Sons

LIQUORICE
Dennis Di Lugo & Co.
Ferguson & Forster

LITHA
Fuerst Bros.

LIENZES
Allen & Hanbury
Blyton, Astley & Co.
Davidson & Gray
Geraud's Pastilles
Gibson, R., & Sons (Manfrs.)
Hill & Son
Jackson, T.
Kames & Co. | Warrick Bros.

MACHINERY
Bennett, Sons & Shears
Burroughs, Wellcome & Co.
Foster, F.
Gardner, W.
Mayfarth, Ph., & Co.
Olson, A.
Pinder, J. W.
Struthers & Craig (Sifting)
Tangyes, Lim.
Werner & Plederer (Knead-
ing and Sifting)

MAGNESIA
Bush, W. J., & Co.
Duncan, J. Fuller & Co.
Evans, Sons & Co.
Greiff, R. W., & Co.
Henry, T., & Co. (Calcined)
Hill, A. S., & Son
Washington Chemical Co.

MALT EXTRACT, &c.
Allen & Hanbury
Anderson & Co.
Burroughs, Wellcome & Co.
Kempier's
Glendenning, W.
Hearon, Squire & Francis
Montgomery & Co.
Moss, J., & Co.
Rames & Co.
Richardson, John, & Co. (Lei-
cester), Lim.
Robinson & Co.

MARKING INKS
Bond, John (Crystal Palace)
(Ink and Pencils)

MEDICINE CHSTS
Burroughs, Wellcome & Co.
Day, Son & Hewitt (Veterinary)
Day & Son (Veterinary)

MENTHOL
A. Mouthol Depot (A. W.
Shirley, Proprietor)
Burroughs, Wellcome & Co.
Christy, T., & Co.
Cocking & Co.
Duncan, J. Fuller & Co.
Evans, Sons & Co.
Hoskins, Wilson & Co.
Tyrer, P. | Vint, T. D.

MERCURIALS
Fuerst Bros.
Howards & Sons
May & Baker, Lim.
Tyrer, T., & Co.

METH. SPIRITS, &c.
Boord & Son | Burroughs, J.
Burroughs, J. & W., & Co.
Jones & Co.
Phillips, G., & Co.
Smith, S., & Co.
Warren, A. & J.

METHYLENE
Robbins, J., & Co.

MICROSCOPES
Dartford, F., & Co.
Perken, on & Rayment

MILK
Nestlé, H. (Condensed)

MORPHIA
Macfarlan, J. F., & Co.
Smith, T., & Co.

**NATURAL
MIN. WATER**
Himvadi Janos

OILS, PAINTS, &c.
Browning, J. H., & Co.
Fox, W., & Sons
Pinchin, Johnson & Co.

OINTMENT BASES
Burgess, E., Jun.
Burroughs, Wellcome & Co.
(Lanoline)
Chesebrough Co. (Vaseline)
Christy, T., & Co.
Deacon, H. J. (Burgess)
Grindley & Co. (Petroleum)
Lloyd, T. Howard & Co. (Jell.)
Richardson, J., & Co. (Leices-
ter), Lim. (Anaspaline)

OPTICIANS
Botwright & Grey
Dartford, F., & Co.
Perken, Son & Rayment
Fuerst Bros.
Witrofsky, J. R.

OXIDE OF ZINC
Hoskins, Wilson & Son, Lim.

PAPAIN
Kuhn, B. (Dr. Finkler)

PAT. MEDCNS, &c.
Anglo-Amr. Drug Co., Lim.
Atkinson & Barker (Infant
Preserv.)
Barclay & Sons, Lim.
Beecham, T. (Pills)
Bow's, Dr. Liniment
Browley, C. (Gout and Rheu.)
Chemists' Association, Lim.
Clarke's Blood Mixture
Congreve, G. F. | Dr. Hebert
Edwards & Son
Evans, Lescher & Webb
Fassett & Johnson
Fennell (Powders)
Goodall, Backhouse & Co.
Hakka Cream (A. P. Bush & Co.)
Holloway (Pills and Oint.)
Hovenden & Sons
Lator (Phosphodyne, &c.)
"Lungili" Co.
March & Co.
May, Roberts & Co.
Newbery, F., & Sons
Roberts & Co. (Foreign)
Rooke, Dr., Lim.
Seahury, Lim. | Sprules, S.
Sinton, W., & Co.
Wilson, A. (Bunter's Nervine)

PEPSIN, &c.
Armour & Co.
Burroughs, Wellcome & Co.
Chassaing & Co.
Fletcher, Fletcher & Stevenson
Greiff, R. W., & Co.
Kuhn, B.
Newbery, F., & Sons (Ingluvine)
Stern, G. & G.
Warner & Co. (Ingluvine)

PEPPERMINT OIL
Bush, W. J., & Co.
Cocking & Co.
Stevenson & Howell

**PERFUMERY,
FANCY SOAPS**
Barclay & Sons, Lim.
Bates, F. W.
Bewley & Co. | Beauletto Co.
Bleasdale & Co.
Blondeau & Cie. | Boehm, F.
Blyton, Astley & Co.
Brooks, A. (Soll's Perfume)
Burroughs, Wellcome & Co.
Bush, W., & Co.
Chemists' Association, Lim.
Chesebrough Co.
Crown Perfumery Co.
Evans, Sons & Co.
Ewen, J., & Sons
Farina, J. M.
Grossmuth, J., & Sons
Hovenden & Sons
Kingsford & Co.
Muhlen, F.
Newbery, F., & Sons (Berdoes)
Pears, J. & F., Lim.
Price's Patent Candle Co.
Rosmarino Co.
Sainsbury, S. (Lav. Water)
Sandoll & Co. | Shirley, A. W.
Sozio & Andrioli
Sprules, J.
Tidman & Son | Treat, R. C.
Truett, H. P., Lim.
Warrick Brothers
West, T. (Ozell's Mona)
Woolley, Sons & Co. (Powder)
Wright, Layman & Umney

PEROX. OF HYDR.
Barton, W., & Sons
May & Baker, Lim.
Robbins & Co.

PETROLEUM
Allen & Hanbury
Barclay & Sons, Lim.
Dee Oil Co., Lim.
Fuerst Bros. (Jelly)
Grindley & Co. (Jelly)
Hatriek & Co., Lim.

PHARM. PREPS.
Allen & Hanbury
Anderson & Co.
Armour & Co.
Arthur & Co.
Barron, Harveys & Co.
Beady & Wates
Boehm, Fredk.
Boehringer, C. F., & Sohne
Boulton, J., & Co., Lim.
Budy & Martin
Burgoyne, Burdighes & Co.
Burroughs, Wellcome & Co.
Chassaing & Co.
Deacon, Ch., & Co.
Duncan, Flockhart & Co.
Ferre & Co.
Fletcher, Fletcher & Co.
George, W.
Giles, Schacht & Co.
Greiff, R. W., & Co.
Hearon, Squire & Francis
Hewlett & Son
Howards & Sons
Jeyes' Sanitary Compounds Co.
Kath & Co. (Conc. Pinotures)
Lambert Pharmaceutical Co.
Mackey & Baker, Lim.
Moss, J., & Co.
Oppenheimer, Son & Co., Lim.
Potter & Clarke
Richardson, John, & Co. (Lei-
cester), Lim.
Smith & Sons
Smith, T. H., & Co.
Southall Bros. & Barclay
Sutton, W., & Co.
Symes & Co.
Tyrer, T., & Co.
White, Alfred & Sons
Woolley, Sons & Co.
Wyeth, Jno., & Bro.
Zimmermann, A. & M.

PHOTOGRAPHIC
Artistic Photo Co.
Barclay & Sons, Lim.
Blackfriars Photographic Co.
Boehm, Fredk.
Botwright & Grey
Burroughs, Wellcome & Co.
Burton, F., & Co.
Fallowfield, J.
Fuerst Bros.
Greiff, R. W., & Co.
Houghton, G., & Sons
Howards & Sons (Chemicals)
Orme, J., & Co.
Perken, Son & Rayment
Schwarz & Co.
Tyrer, T., & Co.
White, Alfred & Sons
Zimmerman & Co.

PILL MACHINES
Pinder, J. W.
Toogood, W. (Coater)
Werner & Plederer

PLASTERS
St. Dalmas, A.
Evans, Sons & Co.
Johnson & Johnson
Seahury & Johnson

PODOPHYLLIN, &c.
Keith, B., & Co. | Smith, T.

POLISHING
Bradley & Bourdas (Altham)
Chancellor & Co.
Fletcher, Raybould
Fordham, W. B., & Sons, Lim.
Oakley, John, & Sons

PILLS (Coated, &c.)
Allen & Hanburys
Anderson Apothecaries' Hall
Beecham, Thomas
Blyton, Astley & Co.
Bromley, G. (Gout & Rheu.)
Burgess, E., Jun.
Clay, Dod & Co.
Davidson & Gray
Deacon, H. J.
Dr. Williams
Eade's Gout Pills
Evans, Sons & Co.
Harrowline Pill Co.
Hearon, Squire & Francis
Hill, A. S. & Son (Holloway's)
Lloyd, T. Howard, & Co.
McKesson & Robbins
Newberry, F., & Sons
Richardson, J., & Co., Lim.
Wand, S. (Pencil Coated)
Warner, W. R. & Co. (Coated)
Wyeth, J., & Bro.
Wyleys & Co.

PORCELAIN GDS
Torgood & Co. (Figs, regist.)

POULTRY FOOD
Spratt's Patent, Lim.

PRECIP. CHALK
Levermore, Ang., & Co.
Mason, A. H., & Son

PRINTING
Bowers Bros.
Coyson, J. R. (Glass)
Economic Printing Co.
Ford, Shapland & Co.
Silverlock, H. | Speller & Co.
Taylor Bros. | Townsend, J.

PUMILINE
Stern, G. & G.

QUININE SALTS
Boehringer, C. F., & Sohne
Greiff, R. W., & Co.
Howards & Sons
Zimmermann, A. & M.

RECIPES
Brooks, T.

RENNET
Duncan, Flockhart & Co.
Greiff, R. W., & Co.

RUBBER
Maw, S., Son & Thompson
Tyer Rubber Co.
Victoria Rubber Co.
Warne & Co.

SACCHARIN
Allen & Hanburys
Barronchs Bros.
Barronchs, Wellcome & Co.

SALICIN
Macfarlan & Co.
Smith, T. H., & Co.

SALICYLIC ACID
Burgoyne Burdidges & Co.
Fuerst Bros. | Kuhn, B.
Zimmermann, A. & M.

SALT
Stearns, G. & G. (Pensalia)

SAUCES, PICKLES
Goodall, Backhouse & Co.
Mason, G., & Co., Lim.
Taver, P.

SCHOOLS, &c.
City School of Chemistry and Pharmacy, Lim.
Liverpool School of Pharmacy
London Homoeopathic and Medical School
Manchester Col. of Pharmacy
Northern School of Pharmacy
Sheffield School of Pharmacy
South London School of Pharmacy, Lim.
The School of Pharmacy
Westminster College

SEEDS
Potter & Clarke

SELTZOGENES
Br. thy & Hinchliffe, Lim.
British Syphon Co.
Evans, Sons & Co.
Fordham, W. B., & Sons, Lim.
Gerant, E., & Co.
Lynch & Co., Lim.
May, Roberts & Co.

SHAVING
Hovenden & Sons (Exuxsis)
Lloyd, Mrs. A. S. (Exuxsis)

SHEEP DIP
Cooper, Wm., & Nephews
Corry & Co., Lim.
Fletcher Bros. & Co.
Jeyes' Sanitary Compounds Co.

SHOP FITTERS
Bowling & Gover
Bygrave, J. & W.
Howlett, S. | Josephs, P.
Natali & Co. | Natali, E.
Poths, H., & Co.
Treble, G., & Co.

SOAP
Ayrton & Saunders
Bacley & Sons, Lim.
Blondeau et Cie. (Vinolia)
Bronnley, H., & Co.
Calvert, F. C., & Co.
Cook, E., & Co.
Dodd Bros.
Fordham, W. B., & Sons, Lim.
Jeyes' Sanitary Compounds
Muhlen, F., & Co. [Co.
Pears, A. & F., Lim.
Price, Napoleon, & Co.
Wright, Layman & Umney

SMELLING SALTS
Crown Perfumery Co.
SODIUM PEROXID.
Barton, W., & Sons

SPECTACLES
Bolwright & Grey
Darton, F., & Co.
Perken, Son & Rayment

SPONGES
Cresswell Bros. & Schmitz
Evans, Sons & Co.
Peterson, M., & Co.

STAMPS (RUBBER)
Hickson, J.

STARCH
Chancellor & Co. (Mack's
Critchell (Glass) [Double]

STOPPERS
Austin & Co. (Sprinklers)
Barnett & Foster | Melin, C.
Spindrum Stopper Co.

STOVES
Clark, S., & Co., Lim.

SUGAR
Blyton, Astley & Co.
Fletcher, Fletcher & Stevenson
Gibson, R., & Sons

SUGAR OF MILK
Boehm, Fredk.
Burroughs Bros.

SULFONAL
Burroughs, Wellcome & Co.
Greiff, R. W., & Co.
Mav & Baker, Lim.

SURGICAL
Ayrton & Saunders
Bacley, W. H., & Son
Bacley & Sons, Lim.
Brady & Martin
Cockin, J. T.
Harrison, J. H.
Haywood, J. H.
Krohn & Sessemann
Liverpool Patent Lint Co.
Powell & Barstow
Quelch, H. C.
Richardson John, & Co. (Leicester), Lim.
Robinson & Sons
Schutze, F., & Co.
Tyer Rubber Co.
Victoria Rubber Co.
White & Co.
Wood, F. | Wood, Vincent

SYPHONS
Barnett & Foster
Brady & Hinchliffe, Lim.
British Syphon Co.
Fordham, W. B., & Sons, Lim.
Idris & Co.
Kilner Bros. | Melin, C.

SYRUPS
Anderson & Co.
Blyton, Astley & Co.
Fletcher, Fletcher & Steven-
Idris & Co. [son (Liquors)]

TABLETS
Blyton, Astley & Co. (Sulphur)
Corsan, J. B. (Advertising)

TEA
Gr. Tower St. Tea Co.

TEETHING PADS
Marriott, E., & Co.
Shirley Brothers

THERMOMETERS
Bailey, W. H., & Son
Barker, Sons Lim.
Darton, F., & Co.
Evans, Sons & Co.
Hicks, J. J.
Newberry, F., & Sons
Perken, Son & Rayment

TINCTURES
Hewlett, C. J., & Son

TINS & CANISTERS
Gilbert, J. A., & Co.

TOILET
Allen & Hanburys (Chrisma)
Bat s, F. W.
Burroughs, Wellcome & Co.
D e Oil Co., Lim. [(Lanoline)]
Hovenden & Sons
Quelch, H. C.
Trinell, H. P., Lim.

TOOTH BRUSHES
Maw, S., Son & Thompson

TOOTH PASTE
Anglo-American Drug Co.,
Beecham, T. [Lim.]
Jewshury & Brown
Sutton, O., & Co. (Block)
Wilson, A. (Bunter's)
Woods, M. (Arecia)

TRUSSES
Bailey, W. H., & Son
Evans, Sons & Co.
Haywood, J. H.
White & Co. | Wood, V.

URETHANE
Howards & Sons

VACCINATION
Frazer & Green (pads)
Sanitary Wood-wool Co., Lim
(Shield)
Vaccine Association (Lymph)

VALUERS & TRNSFR AGNTS
Berdoe & Co. | Brett, F. J.
Crocker, G. B., & Co.
Orridge & Co.

VASELINE
Chesbrough Co.

VETERINARY
Bird & Storey
Corry & Co., Lim. | Day & Son
Day, Son & Hewitt
Elliman, Sons & Co.
James, W. H. (Blisters)
Jeyes' Sanitary Compounds Co.
Lloyd, T. Howard, & Co.
Rookledge, F. E.
Spratt's (Dogs)
Walkers, Troke & Co.

VINOLIA (Superftt'd)
Blondeau & Cie.

WEED KILLER
Aems Chemical Co., Lim.

WHOLST & EXPRT DRUGGISTS
Allen & Hanburys
Allen, Stafford, & Sons
Anderson & Co.
Barron, Harveys & Co.
Battley & Watts
Brady & Martin
Burgoyne, Burdidges & Co.
Bush, W., & Co.
Bush, W. J., & Co.
Clay, Dod & Co.
Davy, Yates & Routledge
Delacre, Ch., & Co.
Evans, Sons & Co.
Evans, Lescher & Webb
Fassett & Johnson
Ferris & Co.
Fox, W., & Sons | Graf, F.
Goodall, Backhouse & Co.
Harker, Stager & Morgan
Hewlett & Son
Hill, A. S., & Son [Clarke
Hodgkinsons, Treacher &
Lloyd, T. Howard, & Co.
Loftouse & Saltmer
Macfarlan, J. F., & Co.
Morrison, R., & Co.
Murdock, J. R., & Co.
Potter & Clarke
Richardson, J., & Co.
Smith & Sons | Symes & Co.
Thompson & Capper
Walkers, Troke & Co.
Willows, Francis & Butler
Woolley, Jas., Sons & Co.
Wright, Layman & Umney
Wyleys (Lim.)

WINES, SPIRITS
Armbricht, Nelson & Co. (Coca)
French Hygiene Socy. (Coca)
Goodall, Backhouse & Co.
Hirst, Brooke & Hirst, L'm.
(Orange)
Idris & Co. | Jackson, T.
Miller, A., & Co. (Orange)
Robinson, B.
Smith, S., & Co. (Orange)
Vin Mariani

1,000 PILLS IN SHOW VASE, 5/6.

PIONEERS IN THE PILL TRADE!

WM. R. WARNER & CO.

SMALL SUGAR-COATED PILLS,

Unequalled in their medicinal properties or in SOLUBILITY, the best ingredients being invariably employed.

Suitable for Retail Sale, in Screw-capped Pill Tubes. Not liable to Stamp Duty unless specially recommended or sold as "Proprietary."

No. 142. Gran. Cath. Comp. (Little Cathartic Granules).
Aloin, 1-10 gr.; Podophyllin, 1-5 gr.; Ext. Hyoscy., 1-20 gr.; Jalapin, 1-10 gr.; Ext. Nue. Vom., 1-20 gr.; Ol. Res. Capsici, 1-20 gr.
Dose, 1 to 4.

Per 1,000,
in Plain Bottle,
4/-.

Per Small Stopped
Vase with painted
glass label,
5/6.

Per Stopped Vase,
with painted glass
label, (5,000.)
21/-.

No. 180.—Gran. Cath. Co. c. Euconymin.—Same as "No. 142," except that $\frac{1}{2}$ gr. Eucaymin is used instead of $\frac{1}{2}$ gr. Podophyllin.
Prices same as for "No. 142."

An "all-round" Antibilious Pill, which has found favour wherever introduced, is "No. 120"
("Pil. Cathartic and Liver").

No. 120. Pil. Cathartic and Liver.
R. Podophyllin, $\frac{1}{2}$ gr.; Ext. Colocynth, $\frac{1}{2}$ gr.;
Pv. Soc. Aloes, 1 gr.; Pv. Scammony, $\frac{1}{2}$ gr.;
Pv. Saponin, 1-8 gr.; Ext. Hyoscyami, 1-8 gr.;
Gingerine, 1-8 gr. Dose, 2 to 4 pills as a
purgative, 1 to 2 pills as an aperient.

Per 1,000,
in Plain Bottle,
4/-.

Per Stopped Vase,
with painted glass
label,
6/4.

Per Bottle (Bulk)
of 5,000,
18/9.

Write for New Complete Price List of PILLS, GRANULES and PARVULES, &c.
by W. R. WARNER & CO., giving upwards of
250 Excellent Formulæ, at moderate and greatly reduced prices.

Depot: **F. NEWBERRY & SONS.**

COOK'S PURE TOILET SOAPS.**SPECIALITIES:—COOK'S SAVON DE LUXE.** The most luxurious soap made.**COOK'S "RIVIERA" (SUPER-FATTED).** Specially prepared for delicate and sensitive skins.**SPECIALITIES MADE FOR THE TRADE.****COOK'S GOLD MEDAL ANTISEPTIC SOAP.** (Thomson's Patent.)

For curing and relieving Eczema, Ringworm, and all skin affections.

SIX PRIZE MEDALS AT GREAT EXHIBITIONS FOR EXCELLENCE AND PURITY.

Can be obtained through

Messrs. S. MAW, SON & THOMPSON, LONDON, or from E. COOK & CO., LONDON.

R C TREATTDunster House Mincing Lane
LONDON

IMPORTER OF

Musk Civet Ambergris Attar - of - Rose**ESSENTIAL OILS**Wholesale
and
Export
only

APPLICATION

ON

QUOTATIONS

AND

PRICE LIST

JOSEPH WATSON & SONS,

MANUFACTURERS OF

GLYCERINE

DOUBLE DISTILLED CHEMICALLY PURE, 1260 Sp.G.,

ALSO FOR

NITRO-GLYCERINE AND OTHER MANUFACTURING PURPOSES.

PACKED IN 10 AND 5 CWT. IRON DRUMS, TO BE RETURNED. AND IN 56 LBS. TINS FREE.

WHITEHALL SOAP WORKS, LEEDS.**ALLCHIN'S SMELLING SALTS.**

The increasing demand for these celebrated Smelling Salts has induced the Proprietor to bring them out in a more portable and elegant form than hitherto supplied. The New-shaped Bottles will be found well worth the attention of the Trade.

WHITE FLINT GLASS, Handsomely Cut, 4 Sizes, Retail	6d.,	1/6,	2/-,	2/6
" " " Watch Shape, for the Pocket, 3 Sizes, Retail	1/-,	1/6,	2/-	

ALFRED ALLCHIN'S PHARMACEUTICAL PREPARATIONS.**SMELLING SALTS.**—The MONOCARBONATE OF AMMONIA, manufactured by ALFRED ALLCHIN, is the Neutral Salt so much valued for the preparation of Smelling Salts. It retains its pungency as long as any Salt remains. 1-lb. bottles, 2s. 8d. each.**LIQ. AMMON. ODORIF.,** or VOLATILE ESS., for Allchin's Ammon. Monocarb. In Stopped Bottles, 4-oz., 1s. 8d.; 8-oz., 3s.; 16-oz., 6s. each.**PURGENTS,** with handsome Cut Stoppers, filled with Allchin's Smelling Salts, 8s. per doz.; retail 1s.**OL. ROSÆ CONCENT.**—One ounce of this Concentrated Solution of Anchusine, mixed with two pounds of Oil will give it the usual colour; it is also admirably adapted for colouring Pomades, Lip Salve, Camphor Balls, &c. 4s. per lb.**OL. FLAV. CONC.**—One ounce, added to two pounds of Pomade, will give the usual golden colour, which is permanent. 4s. per lb.

SOLE PROPRIETORS—

W. BUSH & CO. (late Allchin), Chemists, 94 Richmond Road, Barnsbury, LONDON.

TO BE HAD OF ALL THE WHOLESALE HOUSES.

MULHENS' ORIGINAL No. 4711 BRAND OF EAU DE COLOGNE

THE
Blue & Gold Labelled

EXTRACT OF

DOUBLE STRENGTH

IS RETAILED AT THE

LONDON BRANCH

AT

2/6 per 4 oz. bottle

OR

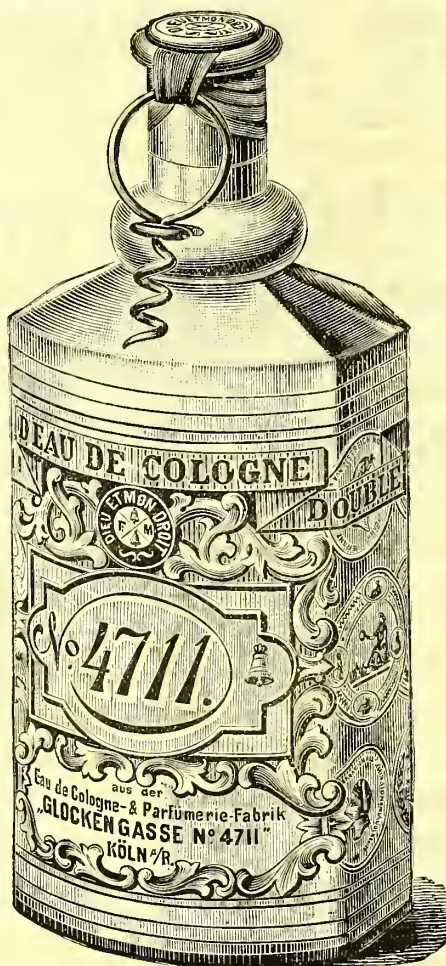
12/6 per case of six.

HIGHEST

AWARDS

WHEREVER

EXHIBITED.



THE
Blue & Gold Labelled

EXTRACT OF

DOUBLE STRENGTH

IS

The PUREST

The STRONGEST

The MOST LASTING

YET

The MOST DELICATE

EVER PRODUCED.

NEVER VARIES

IN

QUALITY.

ONLY FIRST PRIZE AT COLOGNE, 1875.

WHEN ORDERING DO NOT OMIT TO MENTION THE

No. 4711 AND THE BLUE AND GOLD LABEL.
OF ALL WHOLESALE FIRMS IN THE UNITED KINGDOM.

Manufacturer : FERD. MÜLHENS, 4711 Glockengasse, Cologne-on-Rhine.

BRANCHES AT NEW YORK, VIENNA, RIGA, ODESSA, AND

LONDON, 62 NEW BOND STREET, W.

Mr. R. T. REUTER, Wholesale and Export Agent. SHIPPERS are requested to communicate with Mr. Reuter. See also "The Chemist and Druggist" of 24 Dec., 1892, page 906.

E. WITROFSKY,

Drug and Chemical Merchant,
22 FENCHURCH ST., LONDON, E.C.

PURITY GUARANTEED.

Oleum Absinthii, Amygdalæ Dulcis, ditto Essent., Anisi (H. & W.), Bergamotæ, Caryophylli, Cognac, Coriandri, Geranii (Vimard & Co.), Iridis (Vimard & Co.), Juniperi, Lavendulæ, Lemonis, Menth. Pip. (H. G. Hotchkiss), Pini Pumilionis, Sylvestris, Rosmarini, &c., &c., &c.

OTTO OF ROSE (Pure Virgin).

SPECIALITIES:—

CARAMELINE (substitute for Burnt Sugar). 20 times stronger than Caramel.

SOLUBLE ESSENCE OF ORRIS (Maubert Fils & Vimard).

CONCENTRATED PERFUMES, POMADES, FLOWER-WATERS.

Carbolic Acid, Liquid, 25 per cent.

Carbolic Acid, „ 50 „

Carbolic Acid, Liquid, 95 per cent.

Carbolic, Crystal, 35° to 70°.

STOCK KEPT IN LONDON

SOZIO & ANDRIOLI

ESTABLISHED A.D. 1757.]

GRASSE (Alpes Maritimes), FRANCE.

Neroly, Lavender, Geranium, Orris, Patchouly, Thyme, Rosemary, Spike, Santal, &c

CONCENTRATED PERFUMES.

CONCRETE ESSENTIAL OILS.

FLOWER POMADES at the highest possible Saturation. ROSE & ORANGE FLOWER WATER, Sweet Almond Oil.

London Agent—MR. FREDK. BOEHM, 4 CULLUM ST., E.C.

STOCK KEPT IN LONDON

COCKING'S JAPAN OIL OF PEPPERMINT.

Our Extra Steam Refined Oil is treble distilled and twice rectified by steam, by an entirely new process and in apparatus of our own invention, by which all those polymeric products of a tarry and resinous nature which are objected to by some consumers are extracted. It is of water-white colour retaining its full aroma, pungency, and strength, and guaranteed absolutely pure and soluble in spirits of wine.

COCKING'S JAPAN MENTHOL CRYSTALS.

Our Extra Steam Refined quality is in firm, hard, dry, and snowy-white crystals, entirely free from oily contamination, and therefore of the highest melting-point. As the original and largest manufacturers in the world of the true Japan Menthol, we guarantee our brand to be absolutely pure. Beware of substitutes. For full particulars, therapeutic uses, &c., see special circulars, to be had on application.

Sole Agents—JOHN BATT & CO., 39 OLD BROAD ST., E.C.



NOTICE!!

THE FIRM of MARIA CLEMENTINE MARTIN, **NUN**

Have been Awarded PRIZE MEDALS for their Celebrated

EAU DE COLOGNE

AT THE FOLLOWING EXHIBITIONS, VIZ:—

LONDON, 1851. RHENISH PROVINCES, 1852. NEW YORK, 1853.
PARIS, 1855. LONDON, 1862.
VIENNA, 1873. SYDNEY, 1879. MELBOURNE, 1880.

Facsimiles of Prize Medals Awarded at London Exhibitions, 1851 & 1862,
appear on Label of each Bottle. Without such, None are Genuine.

BEWARE OF IMITATIONS!!

EAU DE COLOGNE of the “**NUN**” (so-called), manufactured by any firm
other than the above, is spurious, and an infringement of registered proprietary rights.

PRICE LIST.

	Duty Paid, Net.	In Bond.		Duty Paid, Net.	In Bond.
No. 1.—Half Shorts.....	3/6	5/6	No. 4.—Long Green Flasks.....	16/-	11/-
No. 2.—Shorts.....	16/-	11/-	No. 5.—Wickered Bottles (Small)...	26/6	19/3
No. 3.—Shorts (finely Wickered) ...	21/3	16/6	No. 6.—Wickered Bottles (Medium) 53/-	38/6	
No. 7.—Wickered Bottles (Large).....			106/- duty paid, net; 77/- in bond.		

Small Cases assorted to order (of not less than £3 value in bond) delivered free freight, less 7½ per cent. discount.

All Sizes can be obtained through any Wholesale House, or direct from the Sole Agents for
Great Britain and Ireland,

C. E. MASON & CO.,

2 BEECH STREET, LONDON, E.C.

50 YEARS SUCCESS

HOPGOOD'S

NUTRITIVE & HAIR SEDATIVE CREAM.

The only preparation for the Hair recommended by leading Physicians for the removal of Scurf, allaying irritation, preventing greyness and baldness, and producing a LUXURIANT HEAD OF HAIR.

JOHN A. WALCOTT, M.D., M.R.C.S., says:—"I feel much pleasure in being able to recommend (with confidence) your NUTRITIVE CREAM in all cases of irritation of the scalp, accumulation of dandruff and loss of hair, in each of which I have freely used it with UNFAILING SUCCESS."

In Bottles to Retail at 1/6, 2/6, and 3/6. Revised Wholesale Prices, 12/6, 20/-, 30/- per doz. Supplied by all Wholesale Sundry Houses,

OR FROM THE DEPOT—

OSBORNE, CARRETT & CO., 51 Frith St., Soho., LONDON, W.

NAME STAMPED GRATIS

BEST & SAFEST DENTIFRICE On Orders of
3 doz.

SOLD BY ALL CHEMISTS
AND PERFUMERS IN
ELEGANT CRYSTAL
TOILET CASKET

PRICE 2/6.

ALSO IN PATENT
METALLIC BOX

PRICE 1/-



Through any
Wholesale
House,
or direct to

OSCAR SUTTON & CO., Preston, Lancs.

H. P. TRUEFITT'S SPECIALITIES FOR THE HAIR.

Floral Extract, 3/6, 5/-,

10/6, 21/-

Egg Julep, 2/-, 4/-

CONCENTRATED

Egg Julep, 2/6,

5/-, 10/6.

Golden Fluid,

10/6, 21/-

EUXURON,

1/6.

&c.

Stimulating Lotion, 5/-,

10/6.

Astringent and Tonic

Lotion, 5/-, 10/6.

Quinine and Arnica

Hair Wash, 3/6,

5/-, 10/6, 21/-

Arnica Wash,

3/6, 5/-,

10/6.

&c.

EUCHRISMA.
Combines in one clear Fluid every valuable
Component both of a Hair Grease and Wash,
3/6, 5/-, 10/6, 21/-.

EAU RACINE.
For renewing the original colour of Grey Hair;
superior to all other Restoratives being really
simple in its Composition. Price 6/-.

An elegant Preparation for
the Hair and Beard.
Price 2/6, 3/6, 5/-, 10/6, 21/-.

BRILLANTINE.

H. P. TRUEFITT'S TONIC TOOTH BRUSH

(BY ROYAL LETTERS PATENT.)

PRICE ONE SHILLING.

20 & 21 Burlington Arcade; 13 & 14 Old Bond St., London.

GOLD MEDAL JAMAICA EXHIBITION.

A PURE AND PERFECT ARTICLE FOR
Teeth, Gums, and Breath.



Will purify and beautify the Teeth with a pearly whiteness
polish the enamel; prevent tartar; destroy all living germs
and keep the mouth in a delicious condition of comfort,
health, purity, and fragrance. Non-gritty, and absolutely
pure and harmless to use. Price One Shilling, in handsome
Enamel Box.

The POPULAR DENTIFRICE, which Sells at Sight,

Handsomely put up in Show-cases, as here shown. Printed
in Twelve Colours. An ornament to any window.

Price 7/6 per dozen, of all Wholesale Houses.



The COURT CIRCULAR says:—"Puriline" emanates from
the laboratory of 'Bunter's Nervine' fame. Bunter's pre-
vious preparations for the teeth have received such high
encomiums from medical men that it is not surprising that
this latest production should have received the recognition
and approval of those best qualified to pronounce on its
merits."

H. M. STANLEY, D.O.L., LL.D., the great African explorer,
says:—"I use 'Puriline Tooth Polish and Wash'; am much
pleased with both."

The Countess of ROSSLYN writes:—"Have been recom-
mended to use your Dentifrice, called 'Puriline.' It is
extremely nice; please send me six more."

Show-cards and Handbills supplied by

A. WILSON, 422 Clapham Road, LONDON, S.W.

Proprietor of "Bunter's Nervine," "Dentine,"
and "Puriline."

POSITIVELY THE BEST DRESSING
FOR STRENGTHENING, BEAUTIFYING, AND PRESERVING THE HAIR.

EDWARDS' "HARLENE"

WORLD-RENOWNED HAIR PRODUCER AND RESTORER.

FOR THE HAIR.



FOR THE HAIR.

Handsomely framed Show-card, in 15 colours, size 16 by 21, and 1,000 Counter Bills, with Name and Address of Agent, will be sent, Carriage Paid, on application to us or your Wholesale Agent.

1s., 2s. 6d., 3s. 6d., and 5s. 6d. per Bottle, from Chemists, Hairdressers, and Perfumers all over the world.

MANUFACTURED ONLY BY
EDWARDS & CO., 95 HIGH HOLBORN, LONDON, W.C.

TO THE WEED KILLER TRADE.

For Destroying Weeds, Moss, &c., on Garden Walks, Carriage Drives, Roads, Meadows, &c.

We desire to point out the special advantages which the sale of our "Acme" Weed Killer affords the Trade.

1. The "Acme" Weed Killer is used in the gardens and on the estates of the Gentry everywhere, and by Corporations and Burial Boards in Parks, Cemeteries, &c.

2. Our Retail Prices are such as will induce a ready sale, and we make no charge for 1 and 2 gallon tins.

3. We pay carriage on twelve gallons in 1 and 2 gallon tins, and on 10 gallons in drums and upwards, to any Station or Port in Great Britain.

4. Drums and casks are charged at cost price. Full prices allowed when returned.

Trade and Export Terms on application. The most Liberal Terms to the Trade.

RETAIL PRICES.—In 1 and 2 gallon tins, 2/- per gallon (tins included); in 5-gallon drums, 1/6 per gallon; 10, 15, and 20 gallons, 1/4 per gallon; in 40-gallon casks, 1/3 per gallon.

TESTIMONIALS received from Mr. HEAD, Crystal Palace; Mr. IRWIN LYNCH, Cambridge Botanic Gardens; and others.

THE "ACME" WEED KILLER, FOR CHEAPNESS AND EFFICIENCY, HAS WON FOR ITSELF A NAME FAR ABOVE ALL OTHERS.

SOLE PROPRIETORS AND MANUFACTURERS—

THE ACME CHEMICAL CO., LIM., Tunbridge, Kent; & Carlton St., Bolton, Lancashire.

"BENZINE RECT." JACKSON'S.

SIXPENNY & SHILLING SIZES,

4s. and 8s. per dozen.

Special care is taken in
selecting good Bottles
and Corks.

H.R.H. PRINCE ALBERT'S CACHOUX.
SOLD ONLY IN BRASS BOXES, at 4/- per dozen.
THE FINEST BREATH PERFUME IN THE WORLD.
Dainty morsels in the form of tiny silver bullets, which dissolve in the
mouth and surrender to the breath their hidden fragrance.

ADHESIVE,
TENACIOUS,
AND KEEPS WELL.

JACKSON'S LIQUID GLUE.

SIXPENNY and SHILLING Sizes, at 3/6 and 7/- per doz.
BRUSHES INCLUDED. (B)

SPECIALITIES FROM THE LABORATORY OF THOMAS JACKSON, Strangeways, MANCHESTER.

S. V. METH.

JONES & COMPANY,
COPPERFIELD ROAD
LONDON, E.
LARGEST MAKERS IN THE KINGDOM.

We are prepared to supply METHYLATED SPIRIT in
5-gallon quantities at Lowest Prices.

REDUCTIONS TO LARGE BUYERS.
SAMPLES FREE.

BOORD & SON,

DISTILLERS, FOREIGN WINE AND SPIRIT MERCHANTS, AND METHYLATORS,
ALLHALLOWS' LANE AND BARTHOLOMEW CLOSE, LONDON, E.C.

Quotations for S.V.R. Methylated Spirit and Finish on application.
FINEST ORANGE WINE FOR QUININE

JAMES
BURROUGH

FINE PORT (without tannin)
FINE SHERRY (for Medicinal uses, &c.)
FINE MALAGA (for Steel Wine, &c.)
FINE BURGUNDY (for invalids)
S.V.R. and Methylated Spirit at lowest present prices.

CALE ST. DISTILLERY

All at Lowest Prices and
specially recommended.

CHELSEA

'LANOLIN'

CAUTION.

NOTICE IS HEREBY GIVEN that an Action—"Benno Jaffé and Darmstaedter, Lanolin Fabrik v. Richardson, 1892, B. No. 825"—has been commenced in the Chancery Division of Her Majesty's High Court of Justice, asking for an Injunction to restrain the Defendants in the said Action from an alleged Infringement of the

'Lanolin' Patent, No. 4,992 of A.D. 1882, of which Patent the Plaintiffs in the same Action are proprietors, and for other relief, and such Action is now pending, *and has been set down for Trial.*

**ALL PERSONS ARE CAUTIONED AGAINST
INFRINGING THE ABOVE-MENTIONED PATENT.**

(Signed) J. H. JOHNSON, SON & ELLIS,
47 Lincoln's Inn Fields, London,

Solicitors for BENNO JAFFÉ & DARMSTAEDTER, LANOLIN FABRIK,
The Proprietors of the above-mentioned Patent.

MAY, 1893.



A GREAT SUCCESS!!

BAILEY'S SUSPENSORY BANDAGES.

A. B. C. SYSTEM.

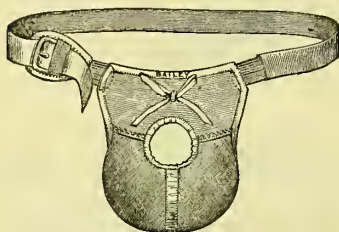


FIG. 1.

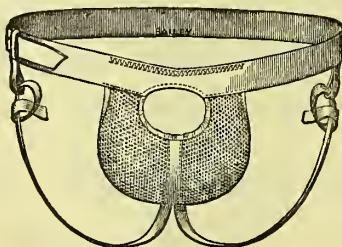


FIG. 2.

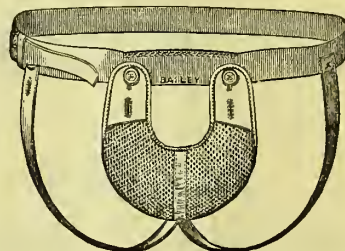


FIG. 3.

Cabinet of 2 dozen assorted, 30/- USUAL DISCOUNT.

TESTIMONIAL.

The Foregate, WORCESTER.
GENTLEMEN,—Please repeat our last order for "Suspensory Bandages." We think your idea of arranging the sizes and qualities by the use of numbers and letters a very excellent one, as it is most convenient to the Chemist in ordering, and we find our customers make use of your method. It brings us many repeat orders.

Yours faithfully,

ANDERSON & VIRGO.

W. H. BAILEY & SON, 38 OXFORD ST., LONDON, W.

TELEGRAPHIC ADDRESS—"BAYLEAF LONDON."

THE SUSPENSORY BANDAGE

TO RECOMMEND IS THE

"SYRACUSE,"

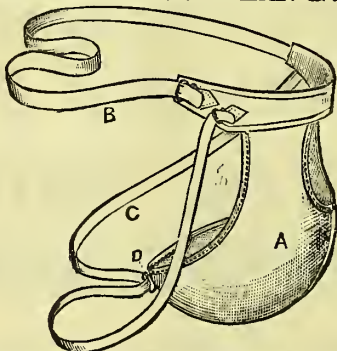
With Self-Adjusting Loop at Back of Pouch.
(PATENTED IN ENGLAND.)

**HAS THE LARGEST SALE
OF ANY SUSPENSORY BANDAGE
IN THE STATES.**

3 SIZES—Large, Medium, and Small.

Made in Seven Qualities, to suit all
Markets.

Each Bandage is carded separately, with
Printed Guarantee.



Each Bandage bears a Guarantee
to give satisfaction to wearer, or
money returned at our expense.

COTTON POUCHES.

Nos. 10	16	21
6/6	12/	18/ per doz.

SILK POUCHES.

Nos. 26	31	34	36
24/	30/	48/	72/ per doz.

We call attention to the fact that our Bandages are advertised in all the leading Athletic papers, and are largely used by Athletes of all kinds. We would strongly recommend all Chemists who require a first-rate Bandage, and who wish to give satisfaction to their Customers, to hold stock, which will enable them to supply our Bandages when asked for.

May be obtained from all leading Druggists' Sundries Houses throughout the Country, or from the

WELLS MANUFACTURING CO. (H. C. Quelch), LUDGATE SQUARE, LONDON, E.C.

SOLUBLE "TABLOIDS" OF COMPRESSED DRUGS.

THYROID GLAND "TABLOIDS."

WE have for some time past prepared, at the request of several physicians, various pharmaceutical products of the sheep's fresh Thyroid Gland for trial in clinical practice, and we are informed by them that the administration of Thyroid Gland "Tabloids" is preferable to the method of feeding with the crude glands or the extracts. These "Tabloids" are not prepared with extractive substances, but consist of the dried gland, each "Tabloid" being equivalent to 5 grains of the fresh moist lobe.

The glands (each attached to a section of the trachea) are delivered to us within three hours of the animal being slaughtered; they are carefully dissected, sliced, and examined for cysts and other morbid formations, all diseased lobes being discarded. The glands are carefully dried at a very low temperature; they are then pulverised and compressed lightly into "Tabloids."

Competent physiologists inform us that as the active substances may be either ferments, globulins, or albumoses, our "Tabloids," being made of the entire glandular substance, should prove eminently satisfactory.

R. "Tabloid" Thyroid Gl., 5 gr. (B., W. & Co.).

The Advantages of the Thyroid Gland "Tabloids" are:—

1. They contain all the active principles.
2. They keep perfectly in any climate.
3. The uniform dose may be regularly administered.
4. The "Tabloids" are easily and agreeably taken by children and fastidious patients.

We have supplied preparations of the Thyroid Gland for clinical trial in liquid, powder, and "Tabloid" forms, and are assured that the "Tabloids" possess distinct and unique advantages over any other method of Thyroid medication.

The doses best given, according to published reports, are from one-half to an entire lobe of the average sheep's thyroid gland—equivalent to from 6 to 12 "Tabloids" per diem—i.e., 2 to 4 "Tabloids" three times daily. They may be swallowed entire with water or other fluid, and they may be also given in all fluid foods.

FOR REPORTS DEALING WITH THYROID MEDICATION

In the treatment of

Myxœdema, Sporadic Cretinism, Goitre, Psoriasis,

And other ALLIED DISEASES, see the following Literature:—

- Dr. VESSALE ("Ctblatt. f. d. Med. Wiss," 1891, 174): TREATMENT OF DOGS AFTER THYROIDECTOMY.
 Dr. R. MURRAY ("Brit. Med. Journal," 1891, ii., 797): TREATMENT OF MYXŒDEMA.
 Dr. M. MUKLEN ("Year-book of Treatment," 1891, 219): THYROID GRAFTING IN MYXŒDEMA.
 Mr. HURRY FENWICK ("Brit. Med. Journal," 1891, ii., 797): DIURETIC ACTION OF THYROID GLANDS.
 Dr. HECTOR MACKENZIE ("Brit. Med. Journal," 1893): TREATMENT OF MYXŒDEMA.
 Report of Edinburgh Medico-Chirurgical Society: CASES OF MYXŒDEMA AND PSORIASIS (Dr. BYRON BRAMWELL). MYXŒDEMA (DRS. A. F. DAVIES, LUNDIE, and MURRAY). SPORADIC CRETINISM (Dr. JOHN THOMSON) SUCCESSFULLY TREATED WITH THYROID GLANDS. ("Brit. Med. Journal," Feb. 25th, 1893).
 REVIEW OF THE SUBJECT. By Dr. P. WATSON WILLIAMS ("Medical Annual for 1893," Section for New Treatment, just issued).

Thyroid Gland "Tabloids," 5 gr. (B., W. & Co.), are supplied to the Trade in bottles of 100 at 24/- per dozen.

HYPODERMIC "TABLOIDS" (Prepared by BURROUGHS, WELLCOME & CO.) SOLUBLE, PERMANENT, PORTABLE.

The growing importance of the Hypodermic method, the marvellous results by it, the vast improvement in the instruments employed, and the perfection to which the Hypodermic "Tabloid" has been brought (to the utter displacement of unreliable and irritating solutions) are all matters of peculiar interest to the earnest practitioner. The alarming symptoms and the untoward physiological disturbances so frequently observed after the administration of ready-made and often partially decomposed solutions are altogether avoided when the injection is prepared from the Hypodermic "Tabloid." They are guaranteed to be absolutely accurate in dosage, do not alter, are really reliable and easily soluble, and can be thrown into solution in a few seconds.

LIST OF HYPODERMIC "TABLOIDS."



Put up in Tubes, each containing 20 "Tabloids," with the exception of those marked with an asterisk, which contain 12 "Tabloids," at 12/- per doz. Tut es.

No.	No.
Aconitine Nitrate Crystalline, 1-260 gr. (36)	Morphine Bi-Meconate, $\frac{1}{2}$ gr. (24)
Apomorphine Hydrochlorate, 1-10 gr. (19)	Morphine Hydrochlor., $\frac{1}{2}$ gr. (55)
Apomorphine Hydrochlorate, 1-15 gr. (51)	Morphine Sulphate, 1-12 gr. (6)
Atropine Sulphate, 1-150 gr. (15)	Morphine Sulphate, $\frac{1}{2}$ gr. (4)
Atropine Sulphate, 1-100 gr. (14)	Morphine Sulphate, $\frac{1}{2}$ gr. (3)
Atropine Sulphate, 1-60 gr. (13)	Morphine Sulphate, $\frac{1}{2}$ gr. (2)
*Caffeine Sodio-Salicylate, $\frac{1}{2}$ gr. (43)	*Morphine Sulphate, $\frac{1}{2}$ gr. (1)
Cocaine Hydrochlorate, 1-10 gr. (23)	[Morphine Sulphate, 1-12 gr.] (12)
Cocaine Hydrochlorate, $\frac{1}{2}$ gr. (22)	Atropine Sulphate, 1-250 gr. (11)
*Cocaine Hydrochlorate, $\frac{1}{2}$ gr. (40)	Morphine Sulphate, $\frac{1}{2}$ gr. (10)
*Cocaine Hydrochlorate, $\frac{1}{2}$ gr. (54)	Atropine Sulphate, 1-180 gr. (9)
Cocaine Phosphate, $\frac{1}{2}$ gr. (44)	Morphine Sulphate, $\frac{1}{2}$ gr. (8)
Colchicin, 1-100 gr. (45)	Atropine Sulphate, 1-120 gr. (7)
*Coramin Hydrochloride, 1-60 (63)	[Morphine Sulphate, $\frac{1}{2}$ gr.] (7)
Curare, 1-12 gr. (46)	*Atropine Sulphate, 1-100 gr. (34)
Digitalin, Crystalline, 1-100 gr. (30)	Pilocarpine Hydrochlor., 1-10 gr. (64)
Ergotinin Citrate, 1-100 gr. (37)	*Pilocarpine Hydrochlor., $\frac{1}{2}$ gr. (33)
Ergotinin Citrate, 1-200 gr. (38)	*Pilocarpine Hydrochlor., $\frac{1}{2}$ gr. (32)
Eserine Salicylate, 1-100 gr. (39)	*Quinine Hydrobromate, $\frac{1}{2}$ gr. (42)
Homatropine Hydrochlorate, 1-250 gr. (47)	*Sclerotic Acid, $\frac{1}{2}$ gr. (21)
Hydrarg. Perchlor., 1-60 gr. (29)	*Sclerotic Acid, 1 gr. (20)
Hydrarg. Perchlor., 1-30 gr. (28)	Sparteine Sulphate, $\frac{1}{2}$ gr. (56)
Hyoscine Hydrobrom., 1-200 gr. (49)	*Strophanthin, 1-500 gr. (52)
*Hyoscine Hydrobrom., 1-75 gr. (48)	Strychnine Sulphate, 1-150 (18)
*Hyoscyamine Sulph., 1-80 gr. (31)	Strychnine Sulphate, 1-100 (17)
*Hyoscyamine Sulph., 1-20 gr. (41)	Morphine Bi-Meconate, $\frac{1}{2}$ gr. (25)
Morphine Bi-Meconate, $\frac{1}{2}$ gr. (27)	Strychnine Sulphate, 1-60 (16)
Morphine Bi-Meconate, $\frac{1}{2}$ gr. (26)	

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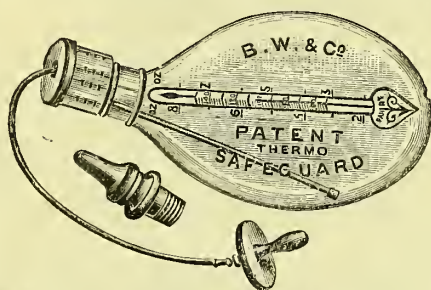
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AS AN OFFICIAL JOURNAL

THE CHEMIST AND DRUGGIST is supplied regularly to every member of the following Societies:—PHARMACEUTICAL SOCIETY OF IRELAND, SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION, MIDLAND PHARMACEUTICAL ASSOCIATION OF NEW ZEALAND, CENTRAL ASSOCIATION OF NEW ZEALAND, OTAGO PHARMACEUTICAL ASSOCIATION, PHARMACEUTICAL SOCIETY OF QUEENSLAND, PHARMACEUTICAL SOCIETY OF SOUTH AUSTRALIA, PHARMACEUTICAL SOCIETY OF WESTERN AUSTRALIA, and TASMANIAN PHARMACEUTICAL SOCIETY.

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OUR SUMMER ISSUE.

WHOLESALE and manufacturing firms who may wish to bring themselves and their products before the best constituency of chemists and druggists at home and in the colonies are requested to note the opportunity which will be provided in our Summer Issue on July 29. For insertion in that issue we are prepared to receive specially printed insets the same size as THE CHEMIST AND DRUGGIST pages, and we shall distribute the issue to 11,000 of the best houses and buyers in the English-speaking drug trade. Specially printed circulars form a most effective and profitable means of advertising, and many of the leading houses in Europe and America have in the past used THE CHEMIST AND DRUGGIST as an economical channel of distributing matter to the trade at large. The publishers will be glad to furnish particulars to any who wish further information regarding the Summer Issue.

"THE CHEMIST AND DRUGGIST" AT CHICAGO.

A REPRESENTATIVE of THE CHEMIST AND DRUGGIST has gone to Chicago, and will be there from about June 3 to June 21. Firms who may wish to see him there, or on the way back, are requested to write to "THE CHEMIST AND DRUGGIST, Publicity Department, World's Columbian Exposition, Chicago."

Summary.

THE guinea prize for our Pharmaceutical Council election competition is awarded in the current issue.

TWO more convictions under the Veterinary Surgeons Act, for the use of the description "veterinary forge," are reported this week.

THE "Ozonisation of Oxygen by Electricity" was the subject of the principal paper read before the last meeting of the Chemical Society.

THE annual meeting of the Midland Counties Chemists' Association and their supper is reported this week. The Exeter chemists have been dining together.

THE prospects of the Dalmatian insect-flower crop, and the chances of a further advance in the market quotations of the flowers and powder, are discussed editorially.

A NOTE by a successful candidate on the examination for the Assistants' certificate granted by the Apothecaries' Society will be found to convey a good idea of that ordeal.

AN article on the manufacture of antiseptic dressings which we publish this week is from the pen of an American pharmacist who has had exceptional experience in this work.

WE publish this week a useful paper on practical dispensing. It was the one to which the prize offered by the Liverpool Pharmaceutical Students' Association was awarded.

MR. DAN RYLANDS, the managing director of the bottle company carried on under his name, has attempted suicide. A chemist at Gloucester made a similar attempt on his life and succeeded.

A CURIOUSLY large number of suicides and attempted suicides by laudanum is reported this week. The evidence at the inquests seems to indicate that laudanum is sold by some chemists somewhat more freely than it might be.

THE drug markets still wear a holiday-look. From Smyrna opium is reported somewhat easier. Business has been done in quinine at full rates. To-day's drug sales passed off draggingly without any special feature of interest.

WE have the pleasure to publish another half-dozen very favourable opinions of our lately-published "Guide to the Preliminary Examination." These are all from pharmacists who have had special experience of candidates for this examination.

THE question of preparations of poisons has arisen in France in reference to the interpretation of pharmacy law there. Several authorities tell that the sale of laudanum was not legally the sale of a poison, because opium is named in the Decree. The Court overruled this objection.

THE Birkenhead Coroner has promised to again bring before the Home Secretary the dangerous facilities for obtaining carbolic acid. Might not the Pharmaceutical Council support this representation? A jury has requested Mr. Braxton Hicks to communicate with the Home Office suggesting that greater restrictions should be put upon the sale of such articles as laudanum when sold in dangerous quantities.

THE "wood of ipecacuanha" question has entered upon another phase by the publication of an analytical certificate, prominently displayed in a London drug-broker's office, declaring the woody stem of Brazilian ipecacuanha to contain about 80 per cent. by weight of the average quantity of the emetine present in sound commercial ipecacuanha root. The subject occasioned an animated discussion at the drug-sales this week.

VEGETABLE CHOLESTERIN.—According to Gerard, the cholesterol of phanerogams has a sp. rot. pow. of $a_0 - 36.5^\circ$ and melting-point 135°C. , that from *Penicillium glaucum* sp. rot. pow. $a_D - 143.3^\circ$ and m.p. 135° , that from *Athalam septicum* sp. rot. pow. -23° and m.p. 134.5° , while the ergosterin of Tauret has sp. rot. pow. of -114° and m.p. 154°C.

English News.

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Mr. Fernando's Debts. Mr. Commissioner Kerr advises Bankruptcy.

In the City of London Court on May 19, before Mr. Commissioner Kerr, the case of *Cox v. Fernando* was disposed of. The plaintiff, Mr. William E. Cox, of 2 Idol Lane, City, E.C., had obtained an order of committal for 20 days against the defendant, Mr. Frank Fernando, chemist, carrying on business at 3 Victoria Building, Piccadilly, for noncompliance with an order of the Court to pay the plaintiff the sum of 5*l.* 5*s.* 6*d.* due.

The defendant now applied to have the order set aside on the ground that it was obtained in his absence. He said he was suffering from concussion of the brain and a broken collar bone at the time, the result of an accident, and that rendered it impossible for him to be at the Court. Even now his arm was in a sling. It was sworn, so he saw from the reports in the papers, that he was taking from 15*l.* to 16*l.* a week. He did not take more than 8*l.* or 9*l.* a week.

Mr. Commissioner Kerr said that the evidence only showed he was justified in making the order of committal.

The Defendant: What? when you have to pay 100*l.* a year rent out of it?

Mr. Commissioner Kerr: Yes.

The Defendant: Well, all I can say is that it is very hard. I have several other orders against me.

Mr. Commissioner Kerr: Then go into bankruptcy. I cannot interfere. Application refused.

Drinking Liniment for Brandy.

An elderly woman named Elizabeth Kenny, who lived in Pitt Street, Sheffield, suffering from rheumatism, was supplied by her medical adviser with a liniment, and advised to take a little brandy when faint. On Sunday morning, feeling unwell, she took what she thought was a small dose of brandy; but which in reality was some of the liniment. The mistake was not discovered for some time, and then the remedies applied were ineffective, as she died soon after.

Threepenny Forgeries.

At the Birmingham County Court, on May 19, Harriett Brough sued James Oakley, druggist's manager, Corporation Street, and Joseph Ricketts, carpenter, to recover 14*l.* 10*s.*, alleged to be due on a bill of exchange. Ricketts had induced Mrs. Brough's son and manager to cash the bill for him. The bill purported to have been accepted by Oakley, but he swore positively that the signature was not his, and that he knew nothing of the bill. His Honour Judge Chalmers said there was an immense amount of small forgery in Birmingham. The practice had become so common, in fact, that the price he found for forging a person's name had fallen as low as 3*d.* For some reason or other no prosecutions were instituted in Birmingham for this practice of small forgery, and the consequence was that they were becoming exceedingly common, and very great difficulties were in consequence entailed on the administration of justice. It was highly desirable that these small forgeries should give rise to prosecutions.

The jury found that the signature was a forgery, and judgment was entered for the defendant.

Continuing his remarks concerning the number of small forgeries, his Honour said that he recently had a case before him in which a man honestly admitted that for the sum of 3*d.* he had forged the plaintiff's signature.

Death from a Quack Medicine.

Benjamin Bradley, a miner of Checkenley, near Middlesborough, died last week under curious circumstances. Seven or eight weeks ago he went to Dewsbury market, and after

listening for a time to a quack doctor he purchased a bottle of liniment which the "doctor" said would cure anything but broken bones. Deceased suffered from deafness, and that was the reason he purchased the liniment. Dr. Greenwood, who had made a *post-mortem* examination, said there were strong evidences of inflammation of the brain, caused by the application of such liniment as produced to the ear. The liniment appeared to be composed chiefly of turpentine. The Coroner said that printed on the label of the bottle which the deceased purchased was the following:—"The Magic bottle and wonder of the world. Watson's aromatic paste for bronchitis, diphtheria, and all kinds of throat-disease, lumbago, gout, headache, colds, chest, and sprains of every description. Outward application only. No home in the world should be without it. Free on application at any time." The Coroner also said the man could not be proceeded against in any way for selling the liniment, as it did not contain poison. The jury returned the following verdict:—"Died from inflammation of the brain and its membranes by applying quack medicine to his right ear, in order to cure deafness."

Cricket.

A match between the Southampton and London employes of Day's Southern Drug Company (Limited) was played on Whit Monday, at the Bar End Cricket Ground, Winchester, and resulted in any easy victory for the Southampton team by an innings and 83 runs. The London men scored only 20 in their first innings and 27 in the second, while the Southampton team built up in one innings a total of 131, to which A. C. Kendall contributed 51 and H. Broad 22. R. K. Bishop and J. C. Kent scored 10 each for the winners; but E. Curtis and E. A. Fry were the only London men who got double figures.

Sale of Methylated Spirit at a Branch Shop.

George William Shackleton, chemist, Abergavenny, has been charged at the police court of that town last week with having sold, at his shop in Frogmore Street, half a pint of methylated spirit, he at the time only having a licence for his shop in High Street. The Bench adjourned the case for evidence as to whether, holding a licence, defendant was not at liberty to sell on any premises occupied by him.

The Drought and the Druggist.

This glorious weather, says a Manchester paper, is responsible for some strange complaints. A chemist has had the audacity to say that he has lost 500*l.* by the sunshine coming, as it did and does, in the very heart of his season. He says that where he feels it most is in the decrease in the sale of patent medicines. Patent medicines, it would appear, are the special delight of the *malade imaginaire*. When people are really ill they call in a doctor, who does not prescribe such nostrums as pay to swell the revenue. What makes the *malade imaginaire* so very remunerative in his demands is low spirits; and this weather seems horribly fatal to low spirits—except those of chemists.

The Price of Drugs at Lewisham.

At the meeting of Lewisham Union Board of Guardians on May 18, the finance committee reported that the price of quinine had been reduced from 5*s.* to 3*s.* per oz., and that of cod-liver oil from 2*s.* 6*d.* to 1*s.* 3*d.* per pint. Upon this Mr. Wilkinson, a member of the board, who had given notice of a resolution requesting the finance committee to examine the contracts for the supply of drugs to the workhouse and infirmary, said he would not proceed with his motion, which was withdrawn.

The Sale of Chlorodyne.

Mr. G. P. Wyatt, Coroner for Camberwell, held an inquiry last Thursday, at Camberwell Workhouse, touching the death of Mrs. Rebecca Louisa Grellier, wife of Mr. Thomas Grellier, of 36 Keston Road, East Dulwich, whose death resulted from an overdose of chlorodyne, self-administered, on the previous Monday morning. The evidence of the husband was to the effect that on Monday morning when he went downstairs he found his wife sitting on a chair in the kitchen and staring vacantly into the fire. He complained to her about not

having got the breakfast ready, and shortly afterwards left home for business, but upon his return in the evening he found the deceased in much the same position and apparently in a state of unconsciousness. He sent for a doctor, and it was then discovered that she was suffering from poison. He was not aware that his wife was in the habit of taking chlorodyne. She had been very low-spirited of late owing to the deaths of two of her brothers upon whom her aged mother was dependent for support.

Agnes Grellier, a daughter of the deceased, said that upon arriving home from school on Monday afternoon, her mother said she was going to have a sleep, and before doing so she kissed all the children. She then laid down on three chairs and remained in that position until her father returned home.

Dr. W. Cooper Keates, of East Dulwich, who was called to the deceased, said he found her suffering from the effects of narcotic poisoning. The place was searched, and in the bedroom three bottles were found, all of which had contained chlorodyne.

A Juryman: Is it not a fact that chlorodyne contains several deadly poisons in a greater or lesser degree?

The Coroner: Yes, that is the case; and the unfortunate part of it is that the sale is practically unrestricted. Anyone can purchase it to the extent of pints if they are inclined to do so.

The jury found a verdict to the effect that the deceased committed suicide whilst in a state of temporary derangement.

Suicide of a Chemist.

An inquest was held last Saturday, at Gloucester, before Mr. C. Scott (City Coroner), on the body of Thos. Wyatt, a middle-aged man, a chemist, who was found dead in bed at his lodgings on the previous Tuesday. Frederick Gaze, tenant of the house where deceased resided, stated that the deceased was formerly in the employ of the late Mr. Vick, veterinary surgeon and chemist, of Gloucester. Wyatt owed nine weeks' rent, and was of peculiar habits. He usually remained in bed until 3 o'clock in the afternoon, when he would go out and not return until midnight. He was also much addicted to drink. On Wednesday he complained of having sprained his ankle, and remained in the house until his death. On Friday night the son of Mr. Davy, photographer, of Northgate Street, called to see the deceased, and the landlord, who thought he was asleep, found him stretched full length on the bed dead, by his side being a half-empty bottle of poison. Mr. Washbourne, surgeon, made a *post-mortem* examination of the body, and found traces of prussic acid. A verdict of suicide whilst temporarily insane was returned.

The Risks of the Chemical-trade.

The Home Secretary has appointed Mr. A. E. Fletcher, Chief Inspector of Alkali Works; Mr. J. Henderson, Chief Superintending Inspector of Factories and Workshops; Mr. H. M. Richards, Inspector of Factories; Professor Simpson, and Dr. O'Neil (Farnworth) to comprise a committee to inquire into the injuries to health alleged to be caused to operatives in chemical-works, and the desirability of special rules being drawn up for their prevention. It is hoped by this inquiry to ascertain—(1) how far the manufactures, as at present carried on, injuriously affect the health of the workpeople, and how far the injurious effects depend upon the age and sex of the operatives; (2) what means can be adopted to abate the injurious effects of the manufacture; and (3) what special regulations should be adopted to protect vats and other dangerous places and utensils used in the manufacture.

The Coroner and Nitric Acid.

The Southampton Coroner held an inquest last Saturday respecting the death of a man who had taken nitric acid with apparently suicidal intent. The man had bought three-pennyworth of the acid from the Southern Drug Company's stores, Below Bar. The Coroner said he was under the impression that nitric acid was one of the poisons which required the signing of a certificate by a witness. The adjourned inquest was held on Tuesday last, when the evidence showed that all reasonable precautions had been taken in the sale, and a verdict of death from poisoning whilst of unsound mind was returned.

The Vagrant Colyton Chemist.

At the Exeter Police Court, on May 19, William Appleby, chemist, of Colyton, was charged, on remand, with vagrancy. When last before the Magistrates his friends promised to take care of him. Chief-Inspector Short now said the defendant had gone to his home and was being cared for. The case was dismissed.

A Chemist's Window Smashed.

On Tuesday morning of last week, Mr. William G. Taylor, chemist, Hungerford, had one of his plate-glass windows smashed to atoms by a milk-cart. The horse "backed," and could not be stopped in time.

Attempted Suicide of Mr. Dan Rylands.

Mr. Dan Rylands, managing-director of Rylands' Glass-bottle Company, London and Barnsley, attempted suicide on Tuesday, by cutting his throat in his bath-room, Shepcote House, Barnsley. His name appeared in the *Gazette* on Friday last in connection with the Brick-works Company with which he was associated, his liabilities being 300,000*l.* sterling. Mr. Rylands was highly esteemed throughout South Yorkshire. He was a large employer of labour, and a colliery proprietor and brick manufacturer.

Robbing Messrs. Holloway.

John Arthur Munton, a young clerk in the employ of Messrs. Holloway, patent-medicine vendors, New Oxford Street, was charged at Bow Street Police Court, on Tuesday with stealing the moneys of his employers. On May 5, one of prisoner's employers, Mr. Henry Belmont Holloway, handed him a cheque for 100*l.*, 15*s.* in gold, and seven 10*l.* Bank of England notes to take to the London and County Bank, Lombard Street. He did not return to his employment, and, it being ascertained that he failed to bank the money, proceedings were instituted. Ultimately prisoner's father took to Messrs. Holloway the cheque and six of the stolen notes, and soon afterwards the accused surrendered himself at the office. He stated that he had been drugged, and, on finding that he had lost some of his employers' money, he was afraid to go back. Mr. Vaughan sentenced the prisoner to six weeks hard labour.

Exeter Chemists Dine.

The members of the Exeter Association of Chemists and Druggists were entertained, on Thursday evening last, at the Imperial Hotel, Exmouth, by Mr. Henry Gadd, J.P., President of the Association. The guests were Messrs. Bulley, Bartleet, H. W. Gadd, J. H. Lake, Lemmon, Milton, Reid, Rowsell, Stocker, E. Stone, Tighe, Tucker, and Wippell (Exeter), Messrs. Griffiths, Bickford, Thornton, and Toone (Exmouth). A cordial vote of thanks to the President was passed by the company after speeches by Mr. J. H. Lake (Vice-President), Mr. Bulley, and Mr. Rowsell (Honorary Secretary).

A Prescribing Chemist's Assistant.

An inquest was held at the Mumbles Police Station, on Tuesday, respecting the death of Hannah Jones, 32, married, who died from the effects of poison. The husband of the deceased stated that his wife had been unwell for some time, and he got a prescription made up at Mr. Evans's, chemist, but did not call in a doctor. After breakfast on Saturday morning he told his wife she had better take her medicine, which, with another bottle, labelled "Poison," stood upon the dresser. She appears to have taken the wrong medicine. She could not read.

Dr. John Bevan, who attended deceased, said her symptoms were those of poisoning by belladonna.

Joseph Bargery, assistant to Mr. John Evans, chemist, Belmont House, Mumbles, said he was unable to tell with certainty the nature of the medicine prescribed for deceased. It was true that he had made up the medicine on the strength of the symptoms of deceased, as related to him by Mr. Jones. The prescription was not copied into any book. The liniment contained in the other bottle was composed of belladonna, aconite, and soap liniment.

The jury, after some deliberation, returned a verdict of death from misadventure.

The Sale of Laudanum.

At Dartford Petty Sessions last week Joseph Wm. Crow was charged with attempting to commit suicide by taking laudanum. Mr. W. E. Goff, pharmaceutical chemist, of High Street, Dartford, said prisoner went to his shop and asked for sixpenny worth of laudanum. Noticing that the man was excited, and owing to the order being rather an unusual one, he asked the prisoner what he wanted the laudanum for, to which he replied that he wished to allay his toothache, opening his mouth and showing witness several very bad teeth. Witness then allowed his assistant to serve the prisoner, and the laudanum was duly labelled "Poison." For 6*d.* six drachms would be supplied. The usual dose for an adult as medicine would be 40 drops, but in six drachms there would be 360 drops. Subsequently Crow seems to have taken a portion of the laudanum. He was treated medically and his life was saved, although he had become unconscious. It was stated in defence that the prisoner had been in bad health of late, and had had some disagreement with his wife, and it was urged in his defence that his mind was entirely unhinged at the time. The justices declined to liberate the prisoner without some guarantee that he would be properly taken care of, and committed him for trial at the Maidstone Quarter Sessions.

A man named Fred Parish, 36, at Sheffield, purchased sixpennyworth of laudanum, went to his bedroom, and drank the whole of it. Returning downstairs he told his wife what he had done. She called a cab and removed him to the Infirmary, about a mile away, and he died a few minutes after admission. Parish had been drinking heavily of late.

A married woman named Whitby, aged 52, the wife of a labourer, was able to purchase 9*d.* of laudanum at Wrexham. She drank some or all of it, and lay herself under a hedge, where she was discovered insensible. She died the next day.

Ann Breadmore died at the Royal Berks Hospital last week from laudanum-poisoning. She lived not very happily with a man named Butler, who said he made 15*s.* a week by selling ink and sauce, and followed the trade of a painter when he could. George Fraser, assistant at Messrs. Bradley & Bliss's, wholesale druggists, King's Road, said that on Wednesday the deceased asked for 2 oz. of laudanum, which he authorised the apprentice to supply to her. She had previously bought laudanum for an embrocation four or five times, and witness took it for granted it was for the same purpose upon this occasion. He supplied her with drugs for trade purposes. He labelled the bottles "Laudanum, poison." They regarded it as a wholesale transaction, not for the quantity, but for the purpose it was used. The Pharmacy Act provided that regulations relating to poisons did not apply in wholesale transactions of which this was an example. Mr. F. L. Orr, house surgeon at the hospital, said deceased was brought to the hospital about half-past 7 on the previous morning, and died shortly before 9 o'clock from poisoning. The Coroner: Should not the name of the seller be on the bottles? Mr. Bradley, of Messrs. Bradley & Bliss, said that under the Act of Parliament wholesale druggists were exempt. The transaction in question was treated as a trade transaction. A verdict of suicide during temporary insanity was returned.

Fanny Eaton, a respectable-looking young woman, was charged a few days since, before the Richmond (Surrey) Magistrates, with attempting to commit suicide by taking laudanum. She had become depressed through not being able to get a situation. Among the witnesses, John Charles Kirkman, chemist, of 5 Lonsdale Terrace, Sandycroft Road, Richmond, recognised the bottle as one which he had sold to the defendant containing laudanum. The defendant had been several times at his shop. She said she had the toothache. Witness cautioned her to be careful when he supplied it. It was a half-ounce bottle. He labelled the bottle "Poison," with his name and address, but that was torn off. The Mayor: Do you sell laudanum to everybody who asks for it? Witness: I am very careful, and always ask them what it is for. I send many away without supplying them. Witness said the dose he sold to defendant was enough to kill her if taken at one time. It was a medium dose. Witness asked the magistrates not to have the fact that he sold the poison published in the papers, as it might injure his business. The Mayor said he had no control over that. What he (Mr. Kirkman) had done seemed a very judicious

thing. Whether it was legal or not he (the Mayor) would not say. The defendant was remanded.

Mr. Braxton Hicks held an inquest at Putney, on Tuesday, respecting the death of John Millstead, a coachman, aged 70 years, who died from the effects of an overdose of laudanum. The coroner pointed out that this case again brought up the question of the restriction of the sale of unscheduled poisons in poisonous doses. In this case the deceased had drunk over an ounce of laudanum. The chemist was quite justified in selling the laudanum, but was it wise that it should be sold in such quantities? The jury returned a verdict of "Suicide whilst of unsound mind," and added a rider requesting the coroner to communicate with the Home Office, stating that they were of opinion that all poisons sold in poisonous doses should be under greater restrictions than at present.

Carbolic-acid Poisoning.

A woman named Langley, wife of a boiler smith, 34, residing at Byker, Newcastle-on-Tyne, and a girl named Emily Tickle, aged 16, committed suicide last week in Newcastle, with carbolic acid. Both had been for some days previously in a despondent state of mind, the latter in consequence of having lost her situation.

James Jones, 43, traveller, Liverpool, had been out of employment for some time and had given way to drink. His wife left him on the sofa one night in an intoxicated condition, and went to bed. He seems to have searched the kitchen cupboard for something to drink, and finding a bottle containing carbolic acid, drank that. Death was the result.

William Hebden, 50, shoemaker, Pollard Street, Leeds, committed suicide with carbolic acid on May 18.

At an inquest respecting the death of Ann Hale, 51, of Birkenhead, who poisoned herself last week with carbolic acid, Dr. Churton, the District Coroner, questioned the young man who sold the carbolic acid to the deceased. It was obtained from an oil and colour shop. Deceased said she wanted it for the walls. He labelled the bottle "Carbolic acid—poison," and supplied about 3 oz. The jury informed the Coroner that they wished to make a presentment to the proper authorities with regard to the easy manner in which carbolic acid could be obtained, and suggesting that a second person should be present at the purchase. The Coroner remarked that he addressed himself some time ago to the Secretary of State, hoping that something might be done to render it absolutely necessary that whoever went for carbolic acid should go in the presence of another person. He would write again to make sure that Mr. Asquith, the present Secretary of State, should know of the number of cases that had occurred in this neighbourhood, in the hope that something would be done to prevent a repetition of those constant acts on the part of women of poisoning themselves and to check the facilities offered to enable them to obtain the poison. As it was at present there was no protection whatever, and any woman might send a child of six years of age to a chemist's shop for twopennyworth, or even a shillingworth of carbolic acid, and the chemist could not refuse it.

William Lloyd, 21, a printer's apprentice at Liverpool, was found dead in a closet at the St. Helens Railway Station, and the evidence indicated that he had poisoned himself with carbolic acid.

Irish News.

Belfast Items.

Mr. McKnight, late partner in McKnight & Nicholl, Donegall Place, has purchased the Carlisle Circus Apothecaries' Hall, which was advertised in this journal.

Mr. Charles Nesbitt, L.P.S.I., formerly chief assistant with McKnight & Nicholl, has gone into the wholesale trade.

Another Medical Hall is about to be opened on the Newtownards Road.

The contract for the supply of medicines for the County Monaghan Infirmary has been obtained by Mr. M. Whitla, M.C.P.S.I.

Professor Whitla, M.D., author of "Whitla's Materia Medica," and examiner at Belfast for registered druggists, is seriously ill with typhoid fever.

From Chemist to Doctor.

"Dr. P. Merrin, surgeon and apothecary," is now the title of Mr. Merrin, M.P.S., and member of the Council of the Pharmaceutical Society of Ireland, he having recently passed the conjoint examination of the Royal College of Surgeons and Apothecaries' Hall. Dr. Merrin intends practising in connection with his Medical Hall at 12 Lower Camden Street, Dublin.

Poor-law Drugs.

The doctor of the Mohill Poor-law Union Workhouse lately reported to the Guardians on certain drugs supplied by the contractor, with the result that samples were sent to the public analyst, Sir C. Cameron, and also to Professor Tichborne. Their appended reports, as indicating the value of analysis, is both amusing and instructive:—

REPORT No. 1.

Department of Medical Officer of Health and Public Analyst.

February 13, 1893.

Sir,—The three drugs which you sent to me have been fully analysed and have been found pure and practically of full strength.

I am, Sir, yours, &c.,

CHARLES CAMERON,

Analyst of co. Leitrim.

To the Clerk, Mohill Union.

REPORT No. 2.

Oxymel scillæ.

This preparation was not of the nature or character of the oxymel of squills of the British Pharmacopœia. When diluted with water and estimated by Fehling's solution it gave reducing sugar equal to 35.9 of grape sugar. The oxymel of the Pharmacopœia gave 83.30 of reducing sugar. The sample forwarded by Dr. Dobson shows in the polariscope 80 degrees plus, whilst oxymel of squills of the British Pharmacopœia made from Irish honey rotates the inst. the other way and gives 30 per cent. minus. In fact, the rotation figures exactly agree with golden syrup. I am of opinion that this specimen is made from golden syrup, and not honey. This is confirmed by the taste and odour. It has little or no taste of squills, and is a badly-adulterated article.

Acetum scillæ.

This preparation was under strength.

The sp. gr. was 1.0326. It should be 1.033 to 1.042. It only contained $7\frac{1}{2}$ grains of extractive to 100 grains of fluid. It should contain 103.4 grains, so that this preparation is about three-quarters the strength of the British Pharmacopœia.

Spt. junip.

The preparation had a sp. gr. of .841, or 60 per cent. It should be about .836, although very slightly under strength.

Scotch News.

More Cheap Medicine.

Mr. J. Alexander, Gallowgate, Aberdeen, has contracted for the supply of medicines to the St. Nicholas Parochial Board. For the St. Nicholas paupers he has 5½d. per pauper per annum, and for the Old Machar 6d. per pauper per annum.

Festivities Commence.

Messrs. Anderson & Co., manufacturing chemists, Edinburgh, gave a day's pleasure to their staff on Thursday last, May 13. In the morning the party drove out in a four-horse coach to Cramond Brig for luncheon. They returned to the warehouse, the top flat of which had been gaily decorated, and there a table was spread for dinner. Mr. Richardson occupied the chair, and in replying to the toast of "The Firm," said they had only been working the present business for two and a half years, but they had gone ahead with remarkable success, and were at present employing thirty hands. He apologised for the unavoidable absence of Mr. Anderson. Another drive followed to Newbattle, returning whence tea was served, and dancing wound up the day's enjoyment.

Fire at a Glasgow Pharmacy.

On the evening of Monday, May 22, fire broke out on the premises of the Glasgow Apothecaries' Company, a four-storey building with attics and basement flats, at 32 and 34 Virginia Street, Glasgow. The fire originated in a saloon

on the ground floor, used as a packing-department, and containing a large quantity of straw. When the first fire-brigade arrived smoke was issuing from every window in the building, and the outbreak looked so serious that the fire-master deemed it advisable to summon assistance from three other fire-stations. Fortunately, however, the fire was confined to the packing-room. The damage by fire was trifling, but it is feared that there will be considerable loss owing to the smoke, which filled the whole building.

The West of Scotland and the Executive.

The following West of Scotland gentlemen have been nominated for seats on the Executive of the North British Branch of the Pharmaceutical Society:—Mr. W. L. Currie, Downhill, Glasgow, President of the Glasgow and West of Scotland Pharmaceutical Association; Mr. James Moir, Crosshill, Glasgow; Mr. George Robertson, Partick; and Mr. R. T. McCowan, Paisley. It is understood that Mr. Robertson, of Partick, although nominated, declines to stand.

French Pharmaceutical News.

(From our Paris Correspondent.)

THEFT OF MEDICAMENTS.—A case of some public interest will be tried at Dijon early next month. A sergeant of the Ambulance Corps has been handed over to the civil authorities on the charge of stealing medicaments from the Military Hospital and selling them to pharmacists in business; the latter will figure in the case as receivers of stolen goods. Three of these are established at Dijon, and one lives at Chalon-sur-Saône.

EXTEMPORANEOUS PREPARATION OF MEDICATED LOZENGES.—In a note appearing in the *Journal de Pharm. et de Chimie* M. Jamet advises the use of weak alcoholic tinctures of such drugs as are soluble in that menstruum for making the ordinary flavoured sugar lozenge into an extemporaneously prepared medicated lozenge somewhat after the fashion in which homœopathic pilules are made. He, however, places one or more drops of the tincture on each lozenge separately so that they are all equally medicated.

REUNION OF BOTANISTS.—On Saturday last the annual session of the French Society of Botany was commenced at Montpellier. It is held there this year in order to celebrate the third centenary of the foundation of the Botanical Gardens by Henri IV. in 1593. Busts of three Montpellierian botanists are to be inaugurated—viz. Dural, Martines, and Planchon, the latter being known as the introducer of American plants into France and for his work generally in connection with the vine. Some foreign *savants* will take part in the proceedings. Professor Warming (Director of the Botanical Institute of Copenhagen), Count Sohns-Laubach, and Dr. Zaccchorias (professor at Strashourg) are amongst the arrivals.

EXPLOSIVE MIXTURE.—The following prescription by a Parisian doctor was recently dispensed by an English pharmacist:—

	Grammes
Iode métallique	10
Alcool	30
Essence de térébenthine	200

Pour inhalation.

The alcohol was insufficient to dissolve the iodine entirely so the mixture of iodine and spirit well triturated was mixed with the turpentine little by little and a fairly good preparation turned out. A small quantity of iodine rubbed in a mortar and the turpentine added to this soon heated and ignited, showing what would have happened if the method of mixing had been inverted.

AN interesting fact concerning the relative hardness of copper and zinc has recently been brought to light. Most authors regard zinc as harder than copper; if, however, the metals are examined in a sufficiently pure state, it appears that copper is the harder of the two.

Foreign and Colonial News.

A MURDEROUS BRAZILIAN PHARMACIST.—A chemist's assistant, named Casimiro Costa, recently attempted to kill a woman at an hotel in São Paulo, Brazil. He stabbed her twice, and then made his escape. On arrival at his pharmacy he committed suicide by taking poison.

LONG HOURS IN BRISBANE.—There is a Chemists' Assistants' Institute of Queensland in Brisbane, and at a meeting held in April last Mr. J. Benson read a paper on "Pharmacy in Great Britain and Queensland." The British chemist, it was stated, was freer than his *confrère* of the colonies, his business hours being considerably less. To Brisbane belonged the distinction of having longer business hours than prevailed in any other part of the world.

CHLORATE OF POTASH IN TURKEY.—As the sale of chlorate of potash is forbidden owing to the authorities regarding it as an explosive, pharmacists are compelled to obtain a permit from the Director of Artillery to purchase in very limited quantities the chlorate from the Gunpowder Monopoly. The Commission which visits the pharmacies every six months has lately absolutely forbidden the sale of compressed tablets containing chlorate, and has given orders that any found are to be seized.

PROJECTED CORNER IN INDIARUBBER.—Reports are in circulation in American rubber circles that Baron de Gondoriz is organising another syndicate to corner crude rubber. Some of the reports are that the syndicate has been actually formed and has already acquired most of the floating supply of the raw material. The syndicate is, it is said, composed of some of the largest rubber-dealers in Pará, and has the support of a well-known banking firm in London, where the Baron has located the headquarters of the movement. Some members of the trade are, however, sceptical as to the success of the new syndicate. They claim that the present deal is bound to follow the unsuccessful ones that have previously been conducted by the Baron, notably those of 1891 and 1883. The present attempt at a corner will force the American rubber trust to pay high prices for its supplies, and it is considered probable, therefore, that the trust will fight the syndicate. By the acquisition of the Woonsocket Rubber Company the trust may now be said to include all the large American companies, except the Boston Company.

ADVENTURES OF A "BACK-BLOCK" CHEMIST.—Though the spirit of adventure may be decadent, settlers in the "back blocks" of Australia occasionally have involuntary experiences that furnish exciting reminiscences for the rest of their lives. Mr. E. Cohen, a chemist of Wilcannia, N.S.W., in company with the Rev. H. Bradshaw, a Church of England clergyman, had recently a narrow escape of perishing from thirst, between Wilcannia and Menindie, whilst on a journey to the latter town. Mr. Cohen and his companion left Wilcannia early one morning and arrived at Culpaulin station at 9 o'clock. They had breakfast there, after which they proceeded on their journey with the intention of striking Rocky Waterhole. When about six miles from there the horses refused to go any further. On Friday afternoon they divided the last pannikin of water. It was terrible weather, so they decided to camp where they were for that night. Early the following morning they put the horses in, but they jibbed again, so the travellers had to ride a short distance, hoping to find water, but without avail. They then started bareback for Culpaulin, but when they had got about five miles the horse Mr. Bradshaw was riding showed signs of knocking up; so Cohen rode on and let Mr. Bradshaw follow. The heat was terrible, Cohen's mouth was fearfully parched, and he was getting delirious. About 5 o'clock, having lost his knife, he broke the glass of his watch, and cut a vein in the horse's neck. By this means he drank a little blood. This made him worse, and he was like a madman. He remembered burying his watch and some loose silver, and had to lighten his load, as he was so terribly exhausted and weak. He rode on till dark, when he camped in the bush near the track. He tied the horse up, but in the morning it was gone. He then started to walk on, when the coach picked him up about 8.30

on Sunday morning, and took him on to Culpaulin station. Mr. Bradshaw was on the coach, which had picked him up in a terrible plight about half an hour before they found Cohen.

THE MEDICAL PROFESSION IN AUSTRALASIA.—According to a recent census, the total number of registered medical practitioners in Australasia, excluding Fiji and the South Sea Islands, is 2,410, of whom 691 reside in New South Wales, 204 in Queensland, 181 in South Australia, 812 in Victoria, 40 in Western Australia, 93 in Tasmania, and 389 in New Zealand. Of these, when the census was taken, 171 had no fixed abode, but were either travelling medical referees to life-assurance companies, absent on a visit to the old country, doing *locum-tenens* work, or waiting for something to turn up. Even in dull times there are never less than 40 travelling medical referees in the colony of New South Wales, a larger proportion than in any of the other colonies. Just over 12 per cent. of practitioners in Australasia have graduated at colonial universities, three-fourths of them at the University of Melbourne, opened in 1862; 47 at Sydney University, opened in 1883; 9 at Adelaide, opened in 1885; and 13 at the University of Otago. It is estimated that fully 25 per cent. of all colonial practitioners are natives of Australia and New Zealand. Nine of the legally qualified practitioners are ladies, 5 residing in Victoria, 2 in New South Wales, 1 in Queensland, and 1 in South Australia. In proportion to the population, there is in New South Wales 1 medical practitioner to every 1,708 persons; in Queensland, 1 to 2,034; in South Australia, 1 to 1,796; in Victoria, 1 to 1,441; in Western Australia, 1 to 1,373; in Tasmania, 1 to 1,666; in New Zealand, 1 to 1,799; and in Australasia, 1 to every 1,660. In New South Wales alone there are upwards of 200 quacks; Melbourne and suburbs boast 14 so-called Chinese doctors. In Western Australia the Government subsidises medical men in outlying districts, which would otherwise have to remain without a resident medical practitioner, by appointing them to non-medical positions, such as resident magistrates, registrars, and other positions, in addition to that of district medical officers, at aggregate salaries varying from 100*l.* to 400*l.* per annum. The majority of medical practitioners in active practice make from 350*l.* to 1,200*l.* a year; perhaps 7 per cent. make from 1,200*l.* to 2,000*l.*; 2 per cent. from 2,000*l.* to 4,000*l.*, and a very few from 4,000*l.* to 6,000*l.* a year. In former years, when times were better, and competition less keen, some made from 6,000*l.* to 10,000*l.* a year. The average income is probably between 700*l.* and 800*l.* There is also a reverse to this, upon the whole, not very gloomy picture:—The club system in Australia, and the unenviable life in most of the bush towns, which induces many practitioners to indulge to excess in alcohol and narcotics, are largely answerable for the appalling death-rate amongst medical men in these colonies. The average death-rate per annum among medical practitioners for the last six years has been 26.67 per 1,000, while the average death-rate throughout Australasia is between 13 and 14 per 1,000.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

CUMMING—MCKAY.—On May 23, at Sinclair Street, Thurso, by the Rev. Wesley Kelly, William Cumming, chemist and druggist, Edinburgh, to Margaretta Swan, elder daughter of Mr. William Gordon McKay, late of Borrowston, Reay, Caithness.

WEBSTER—TYERMAN.—At St. John's Church, Albany, Western Australia, on April 17, by the Rev. W. Wardell Johnson, by special licence, Alfred Edwin Webster, of the firm of Birch & Webster, chemists and druggists, Fremantle, son of the late Alfred Pomeroy Webster, of Newcastle-on-Tyne, to Eleanor Mary (Nellie), youngest daughter of Robert Tyerman, Thornton-le-Street, Thirsk, Yorkshire.

DEATH.

BELL.—On May 18, at Medical Hall, Banwell, William Henry Bell, chemist and veterinary-surgeon (late of Bath). Aged 55 years.

THE CHEMICAL SOCIETY.

ALTHOUGH three papers were on the list for the meeting of May 18, the first was of such dimensions that it monopolised almost the whole of the time, and the nature of the other two was only briefly indicated by the authors in the space of a few minutes each. This by no means uncommon occurrence had a special significance on this occasion, as will be seen later.

OZONISATION OF OXYGEN BY ELECTRICITY.

That something electrical was in the air could be seen at once on entering the room. The left end of the table was occupied by a Wimshurst machine, and the right by a stage of elaborately-designed glass tubes and mercury gauges; while over the intervening space were spread a coil, a discharger, and various keys. The whole system was connected by a network of wires, which ramified about the table like stoleniferous offshoots, and hung in wonderful festoons suspended from the ceiling.

The preliminary business over, Mr. W. A. Shenstone undertook to explain how all this complicated apparatus had been used by himself and Mr. M. Priest in their "Observations on the Production of Ozone during Electrical Discharge through Oxygen." The work did not, he premised, break entirely fresh ground, but the previous investigation, though they had shown that a low temperature and high pressure were favourable to the condensation, had not been so exact as seemed desirable.

Attention was directed to the study of the effect of three factors upon the production of ozone by the electric discharge through oxygen—namely, (1) varying difference of potential; (2) varying rapidity of discharge; and (3) varying construction of apparatus. Some earlier work carried out by Mr. Shenstone had shown that highly purified and dried oxygen was practically as capable of ozonisation by the electric discharge as the ordinary gas.

Far too much space would be necessary to detail the elaborate precautions taken by the authors to ensure the dryness of the oxygen used (obtained from a mixture of potassium and sodium chlorates) and its freedom from nitrogen. The varying difference of potential of the current was determined by reference to the spark-length observed in a micrometer discharger, and the ordinary spring contact-breaker of the coil was replaced by a mercurial interrupter worked by clockwork, so as to enable the authors to obtain a definite and regular number of interruptions—from 1 up to 1,200 per minute. The ozoniser used was of the Brodie type, consisting of an inner tube of the thinnest possible glass, fitting more or less closely into an outer glass jacket. The whole was immersed in an ice-bath kept uniformly mixed by passing a few bubbles of air through it occasionally. This was effected by a kind of U-shaped thistle-tube, the shorter expanded end of which was fixed immediately below the ozoniser in the bath. Ingenious arrangements were included in the apparatus for preventing the access of ozone to the mercury-gauge—which seriously impairs the fluidity of the mercury and hinders accurate reading—and to prevent the ingress of air.

The explanation of the construction of the different parts of the apparatus—which the authors said took about three weeks to prepare and put together—occupied a long time, even with the aid of a number of diagrams. Finally, however, the working of the whole arrangement was shown by setting the clockwork going for a few seconds, and then attention was directed to the results so far obtained.

In the first place it was established that results fairly concordant and comparative with each other were yielded by this method. A low difference of potential when the path of the discharge was short—i.e., when the distance between the inner ozonising tube of thin glass and the outer jacket was small—produced more ozone (the amount was between 13 and 15 per cent.) than a high potential, though the latter was at first more rapid in its action.

As regards the effect of rapidity of discharge, it was found that with a number of interruptions exceeding a thousand per minute—as, for instance, with the ordinary spring con-

tact-maker which gives about six thousand—the ozone primarily formed was destroyed. This destructive effect was unmistakably indicated by the mercury-gauge, if, after a reduced number of discharges had been kept up by the clockwork interrupter, the spring contact-breaker was put on. Respecting the theory of what takes place in the ozoniser, the authors inclined to the belief that the discharge split up the oxygen molecules into atoms, and that these subsequently recombined to form ozone.

Professors Ramsay and Crookes wondered that no account had been taken in the experiments of the amount of electricity employed, and Professor Armstrong was inclined to throw doubt upon the authors' dicta as to the ready ozonizability of pure dry oxygen, and as to the actual nature of the change which took place in the ozoniser. He thought the efficiency of the drying-tube (of broken potash) used in the experiment would not be so high as to justify the first conclusion, and favoured the theory that water (not entirely eliminated from the apparatus) played an important rôle in the reaction.

Mr. Shenstone excused the neglect of amount of electricity with the remark that the work was only preliminary and had not been carried that far, and reminded Professor Armstrong that his statement about the ozonisation of pure dry oxygen was based on experiments made with gas which had stood nine months in contact with P_2O_5 .

THE RELATIVE AVIDITIES OF SOME WEAK ACIDS

had been studied by Dr. Shields. The question had to do with the so-called distribution of chemical action when a number of weak acids compete for a base, and was attacked along a line of experiment and deduction, resulting in the taking of the ratio of dissociation as the measure of strength or avidity. The process was illustrated by reference to the dissociation and reverse chemical action which occur with potassium cyanide and water, thus: $KCN + H_2O \rightleftharpoons KHO + HCN$.

The avidities of the weaker acids (tartaric, citric, carbonic, carboic, &c.) were compared in tabular form against hydrochloric acid as 100. This showed, for instance, that the avidity of HCl was about a hundred thousand times stronger than that of C_6H_5HO . All the experiments were made in $\frac{1}{10}$ solutions.

Professor Ramsay characterised this research as most important: these reverse actions were constantly occurring in manufacturing processes, and it was highly desirable to know how and to what extent they went on.

By this time the greater proportion of the members had drifted away, and the abstract given by Dr. J. Walker of his work on

THE RELATION OF BOILING-POINTS AND MOLECULAR WEIGHT

was listened to by a thin audience. Quite briefly the author stated that the boiling-point of ethers in the series he had studied could be theoretically determined within a degree or so (of the absolute thermometer) by means of the formula $T = aM^b$, where M stood for molecular weight and a and b for constants varying with the series under consideration. Bodies containing a methyl group constituted an exception to the accuracy of the formula, as they did generally in such calculations by constants.

Professor Armstrong observed, somewhat "satirical," that if Dr. Walker could supply a formula for accurately determining the relation of boiling-points and molecular weight he would deserve a testimonial, but added that, so far, he had only worked with a notoriously well-behaved group of bodies: it was somewhat doubtful how far the results would be useful with substances of more refractory nature.

The Chairman was announcing the adjournment of the meeting, when Professor Ramsay expressed a desire to move notice of motion for the more even distribution of the papers announced to be read during the evening over the time available. He only succeeded, however, in drawing a mild protest from the Chairman that the matter was one for the committee to consider, and so the subject dropped for the nonce. The immediate occasion of the move was, no doubt, the fact that the first paper on the agenda, as already intimated, occupied practically two hours, and the remainder of the business had to be compressed into a few minutes.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

THE annual meeting of the Midland Counties Chemists' Association was held on May 18, at the Mason College Birmingham. Mr. C. Thompson (President), occupied the chair.

The PRESIDENT submitted the annual report, which named the subjects of the papers read and the discussions which had taken place during the past session. The scheme drafted by the reorganisation committee was given in detail. It was stated that Mr. F. H. Alcock had found it necessary to resign his position as honorary secretary. From the financial statements presented, it appeared that the excursion cost 7*l.* 17*s.* 7*d.*, and yielded 4*l.* 4*s.* 6*d.*, the balance being taken from the recreation section, which after that showed a balance of 3*s.* 1*d.* in hand. The ball yielded a profit of 5*l.* 16*s.* 7*d.* The library fund account showed 1*l.* 19*s.* 9*d.* in hand, and the general account showed a balance due to the Treasurer of 1*l.* 18*s.* 10*d.* There were 145 members' subscriptions accounted for. The Benevolent Fund had granted 1*s.* 6*d.* during the year.

The PRESIDENT, in moving the adoption of the report, expressed the thanks of the Association to the gentlemen who had read papers during the Session, and said that those papers were certainly above the average, and had done something towards advancing the interests of pharmacy in the district. (Hear, hear.) Perhaps the most important point the Council had had under discussion had been the reorganisation of the Association. That was a matter they had carefully considered, and they now presented a report for the approval of the general meeting. If that report was approved the scheme would come into operation at once. He considered the proposed change a wise one, because it more fittingly described the nature of the organisation. Clause 6 of the scheme they had submitted gave two members for each party division of Birmingham and Aston, and one representative for each party division outside Birmingham. That, as the members would see, was carrying out the idea of territorial representation which he advocated in his address some time ago. The seventh clause provided that each member of the Council should be duly qualified under the provisions of the Pharmacy Act. Speaking on behalf of the committee he could say that they were most unanimous on that point, and he intended to ask the members later on to approve their action in order that they might put the new rules into force. As to territorial representation, a considerable number of replies had been received to applications he had sent out for opinions throughout the country, and those replies would be printed in due course. They were arranging to have a conference at Nottingham in August, and this question, together with other matters more of a trade character, would then be considered. Having expressed his satisfaction that Mr. Young was one of the successful candidates for election to the Pharmaceutical Council, the President proceeded to remark that the question of early closing had been considered by the Committee of the Association. He added that he should like to see a larger influx of members and a growing interest taken in the affairs of the organisation. They would then be better off in funds, and would be able to extend their sphere of usefulness. (Hear, hear.) Perhaps the most painful aspect of the report was the withdrawal of Mr. Alcock from the office of Secretary. (Hear, hear.) He had held the position for nine years, and he might say that during that time he had given an enormous amount of labour, thought, and energy, in order to forward the interests of the Association. (Applause.) He thought it was only right that they should at some future time acknowledge his services in some tangible form. (Hear, hear.) Referring to illegal trading in patent medicines, he said he should like to point out the danger the public ran in dealing with unqualified people. Unfortunately they had a large share of them in Birmingham, and he considered it proper that they should occasionally let this fact be known, so that the public might be on their guard in dealing at establishments conducted by unqualified individuals.

Mr. A. SOUTHALL seconded the resolution. He said that so far as one could judge by the present and a few preceding reports, they had certainly gone ahead during the past few years. It looked as though they had got into permanent

lodgings and were destined to do a large amount of good in the future. The recreation section had been successful. He was glad to see that, because chemists had rather failed in the past in developing their physical faculties. He concluded by expressing regret that their Secretary had announced his intention of resigning, and hoped they might yet induce him to reconsider his decision. (Hear, hear.)

Mr. DEWSON thought the question of the re-organisation of the Association should be left to a special meeting, when there would be more members present. The change was so radical and complete, especially with regard to section 6, that the Association ought to have a further opportunity of realising and discussing the important alterations contemplated before they were passed. He pointed to the possibility of gentlemen being elected on the Council who were not members of the Association, or had taken absolutely no interest in the organisation, and to the circumstance that a man might represent a certain district without practically having any constituency. In order to remedy this, he moved as an addendum to clause 6, "that no representative be elected for a district containing less than five members," and that "the representative must be a member of the Association for a certain period, say, twelve months."

Mr. W. M. FREEMAN considered it would be advisable if the chemists of the Midlands were called upon more frequently to discuss matters which affected their interests. One thing chemists ought to have an opportunity of expressing an opinion upon was the unsatisfactory prosecutions instituted under the provisions of the Sale of Food and Drugs Act. It seemed to him that these prosecutions had been increasing in number recently. The prosecutions were very important, and they ought to be undertaken only on the clearest possible evidence, and ought to be adjudicated upon most carefully, because conviction might mean something more to tradesmen than the mere fine. The majority of the magistrates did not understand analytical and scientific evidence. He thought it would be to the public advantage if chemists were more numerous represented on the Bench than at present. Alderman Clayton represented the chemists, and Sir James Sawyer, although not a chemist, was eminently capable of forming an opinion upon chemical evidence. The Bench would be strengthened in Birmingham by the addition of the names of Mr. Southall and Councillor Barclay.

Mr. J. BARCLAY spoke of the necessity of doing something to induce pharmacists to take a greater interest in the affairs of the Association. As to the representation of chemists on the Bench, they would all like to see that improved; but he thought chemists might discuss the question for a long time before bringing about the desired reform.

Mr. PERRY, as one of the committee engaged in the work of reorganisation, said the matter had been very well threshed out. As to the name of the Association, he did not think its present title properly described it. It was the feeling on the committee that they should adopt a cognomen which described their position in the community. What they had tried for in proposing reorganisation was to get increased interest as the result of direct representation. Of course, it remained to be seen whether there was really any latent interest; but, any way, no harm could be done by adopting the experiment. (Hear, hear.)

The amendment was then put, and lost by six votes to two, and the resolution carried.

The Council for the ensuing year was re-elected, with the addition of Mr. Pratt, of Warwick.

The PRESIDENT proposed a vote of thanks to Mr. Alcock for his services as secretary for the last nine years. He said no one, except those who had held official positions could properly appreciate the labour Mr. Alcock had bestowed in the interest of the Association.

Mr. G. E. PERRY seconded the resolution, which was unanimously carried, and Mr. ALCOCK briefly replied.

Afterwards the annual supper was held at the Colonnade Hotel, New Street, under the presidency of Mr. C. Thompson.

The toast of "The Pharmaceutical Society" was proposed by Mr. MAGOR, and responded for by Mr. THOMPSON as local secretary for Birmingham, and by Mr. F. J. GIBSON as local secretary for Wolverhampton. Mr. R. D. GIBBS proposed "The M.C.C.A.," for which Mr. W. JONES, Vice-President, responded.

The report of the scrutineers appointed to look through the ballot-papers showed that the present Council was re-elected, with the addition of Mr. Platt, of Warwick, to represent that district.

"GUIDE TO THE PRELIMINARY EXAMINATION."

2s. Post free, 2s. 3d.

THE following are quotations from letters received concerning this book during the past week:—

"I am of opinion it is a most helpful book, therefore shall not fail to recommend it."

FREEMAN W. HUNT (Plymouth).

"I consider it a most useful book for students."

J. MUNDAY (Cargiff).

"It cannot fail to be very serviceable to many candidates."

RICH. REYNOLDS (Leeds).

"I have examined the book carefully, and retain such favourable impressions that I shall certainly recommend it to all candidates in Guernsey."

JOHN B. NICKOLLS, F.C.S. (Guernsey).

"I think it will be very useful indeed to the persons for whom it is intended. I shall take pleasure in introducing it to the youths who are working for the examination"

JOHN BINGLEY, F.C.S. (Northampton).

"Having devoted some little time in looking through it, I would like to put on record that, to the best of my judgment, the book is exactly what has been wanted for some years past, and is calculated to be of great service to all candidates who may be so fortunate as to secure it. I shall have great pleasure in recommending it."

RICHARD PARKINSON (Liverpool).

Any wholesale drug or sundries house will supply this book at the published price. The following firms have already stocked it:—

Ayrton & Saunders, Liverpool
Barelay & Sons (Limited), London
Bleasdale, Wm., & Co., York
Duncan, Flockhart & Co., Edinburgh
Edwards, W., & Son, London
Glasgow Apothecaries' Company, Glasgow
Hirschfeld Bros., Bream's Buildings, Fetter Lane, E.C.
Kimpton, Henry, 82 High Holborn, W.C.

Lloyd, T. Howard, & Co., Leicester
Maw, S., Son & Thompson, London
Newbery, F., & Sons, London
Potter & Clarke, London
Raines, Clark & Co., Edinburgh
Raines & Co., York
Smith, T. & H., & Co., Edinburgh
Thompson, John, (Limited), Liverpool
Woolley, James, Sons & Co., Manchester

PHARMACEUTICAL COUNCIL ELECTION.

RESULT OF THE POST-CARD COMPETITION.

THE response to our last post-card competition has been meagre, partly, perhaps, because of the short period during which the poll remained open, and partly, no doubt, on account of the exceedingly small interest shown by the electors themselves in the annual Council election. We have received 126 post-cards, of which 3 were informal. Of the remaining 123 no less than 45 did not name a single Councillor in the numerical order in which he was placed by the result of the poll; 42 only contrived to place 1 out of the 14 in the proper position, 25 got two names in the correct places, 5 placed 3, 5 indicated 4 correctly, and 1 competitor only succeeded in naming 5 of the newly-elected councillors in the positions which they occupied at the poll. This gentleman is

MR. J. MARLOR, OF HALSTEAD,

to whom the guinea falls. The 5 Councillors whose names this gentleman inserts in their proper positions are Cross (3), Greenish (4), Southall (10), Leigh (12), and Young (13). He also accurately forecasts the defeat of Messrs. Warren and Bateson, a matter over which most competitors have gone wrong. It was assumed by the majority of our post-carders

that both the new candidates, Messrs. Bateson and Young, would fail, and the rejection of Mr. Warren was evidently as great a surprise to most of the competitors as the coming in second of Mr. Carteighe; more than two-thirds (88) placed Mr. Carteighe first on their lists, while only 7 foresaw that Mr. Atkins would head the poll. The first place was given to Messrs. Bottle and Abraham by 5 competitors each; to Mr. Greenish by 4; to Messrs. Hampson, Southall, and Cross by 3 each, and to Mr. Allen by 2; while Messrs. Young, Newsholme, and Hills each found one faithful henchman of enough temerity to prophesy the top place. The fourteenth position on the list was assigned as follows:—Carteighe, 1; Allen, 2; Bottle, 2; Southall, 2; Greenish, 3; Abrahams, 4; Hampson, 4; Atkins, 5; Hills, 5; Cross, 7; Bateson, 7; Newsholme, 11; Martin, 12; Leigh, 14; Warren, 19; Young, 25.

THE APOTHECARIES' HALL ASSISTANTS' CERTIFICATE.

A MANCHESTER man who has secured the document provided by the Apothecaries' Society certifying that the holder is competent to dispense medicines, sends us the following account of his experience of a recent examination:—

I presented myself (he says) last November, at 2.30 p.m., and after waiting a few minutes was called to dispensing, and had the following:—

Phosphorus gr. $\frac{1}{2}$
Ferri redact. gr. liij.

M. Ft. pil. Mitte xxiv.

One twice a day.

Lin. terebinth. B.P. ʒiv.

Had the B.P. given me.

Some of the candidates had the B.P. castor-oil mixture to prepare.

After waiting a short time whilst we were provided with luncheon, I was called up for Theory.

The following are as many of the questions as I can remember. Mr. Davies was my examiner.

Chemistry.—Shown FeSO_4 . How made? How many kinds official? What action would take place if all the H_2O in the dried was driven off?

Shown acid benz. How made? The processes shown and salicylic processes of manufacture? Natural and artificial, which is the best? What might the artificial contain as impurity?

Shown a salt which I said was MgSO_4 .

Mr. Davies smiled and said it was the other, ZnSO_4 .

How are they both made? How distinguished chemically? Give me four tests.

Shown pot. nit. How made commercially? How is pot. sulph. made.

How are the two mercurial salts made— HgCl and HgCl_2 ? How distinguished chemically? That finished chemistry. I had to give the doses in every case.

Materia Medica.—I had to give the botanical name, natural order, and active principles of the following: Aconite (leaves and root), belladonna (leaves and root), kino, chiretta, marshmallow.

Opium: How is morphine B.P. obtained from crude opium? How is apomorphine made, and apocodeine?

Jalap: The difference between a tuber and a tubercule?

Nux vomica: How is strychnine prepared? Calabar bean? Matico leaves? Jaborandi? &c.

Pharmacy.—How is ext. aconiti B.P. prepared? Why the different temperatures, &c.

Lotio hyd. nig., aq. camph., aq. laurocerasi, enema opii, tr. opii, tr. opii ammon., tr. camph. co., vin. opii. How prepared? This part of the examination ended up with a good round on doses.

Prescription-reading was very easy, as I had only one to translate into full Latin and then give the English of it.

I had no botany whatever, though I noticed several fruits on the table.

After waiting a few minutes I was told I had passed, and had to wait a short time for the certificate.

Legal Reports.

VETERINARY FORGE.

At West Ham Police-court on May 15, J. H. Venables, of Woodgrange Road, Forest Gate, appeared to a summons, issued at the instance of the Royal College of Veterinary Surgeons, for an offence under section 17 of the Veterinary Surgeons Act, 1881. The defendant, who was not qualified under the Act, had displayed the following words on a board:—"J. H. Venables, veterinary shoeing-forge and general smith. Veterinary medicines kept in stock." Mr. Thatcher, who appeared for the College, drew the Magistrate's attention to the reported case of the Royal College of Veterinary Surgeons v. Robinson, which decided that the use of the words "veterinary forge" was an infringement of the Act. The Magistrate said he was of the same opinion, and convicted the defendant, and fined him 2*l.* and costs, or 21 days' imprisonment in case of non-payment.

At the same time and place Joshua Venables and J. H. Venables, trading in co-partnership as J. Venables & Son, were also prosecuted by the College for a similar offence. In this case it appeared that the defendants had exhibited a board at Dame's Road, Forest Gate, with the words:—"J. Venables & Son, veterinary shoeing-forge, tyre, and general smiths. Repairs in all its branches. Mr. H. Gray, M.R.C.V.S., attends daily. Cattle-medicines kept in stock." The Magistrate fined both defendants 1*l.* each and costs, with the alternative of 21 days' imprisonment in default of payment.

THE ALLEGED THEFT OF SYPHONS—COMMITTAL.

JOHN MACK, general dealer, and John Bayliss, jun., mineral-water manufacturer, of Chapel Street, Islington, were charged on remand at North London Police-court, on Wednesday, the former with stealing 27 syphons and the latter with receiving them, well-knowing them to be stolen.

Mr. Webb, solicitor to the London Mineral-water Bottle Exchange and Trade Protection Society, prosecuted, and Mr. D. A. Romain, defended.

The evidence already given was read over, this being that Mack obtained the syphons from the matron of a Salvation Army home, on the pretence that he had been sent for them by Mr. William Sharman, chemist, of Mare Street, Hackney. Subsequently Detectives Kemp and Lee found 18 syphons in a sack at Bayliss's premises, and Bayliss admitted having purchased these from Mack for 3*l.* each. Amongst these 18 syphons was one bearing the engraved word "Idris" on the metal top, and three bearing the name of "N. Paul & Co.," which latter Messrs. Idris had purchased with the business of the Pauls. Another syphon bearing the name of "Idris," and the label of Bayliss was found on the premises, and two other syphons from which it was alleged the name of Idris had been erased from the syphon top.

Mr. Romain, who defended, suggested that this name which the prosecution said was Idris might have been "Atlas," because there were the same number of letters, and the final was an "s."

Miss Hudson was called to prove that she only got her syphons of mineral waters from Mr. Sharman, and Mr. Sharman said he only dealt with Idris & Co., of Camden Town, having some of the sodas in plain, and others in stamped syphons.

Mr. Adpar Jones (Idris & Co.) identified the tops of the syphons produced, and said the bottles were similar, although they now bore the name of Bayliss. The witness was subjected to considerable cross-examination to show that he charged deposits on the syphons; but he added that he still held a property in them. He had given 1*s.* or 1*s.* 3*d.* each for the syphons he bought from Paul & Co., and though the syphons were not actually worth 2*s.*, the charging of that sum covered a good deal of the losses by breakages, &c. The police said they found a number of syphons bearing other people's names, but Mr. Romain objected to this evidence, because they did not form part of the charge.

In the result, Mr. Bros decided to commit both prisoners for trial, and consented to take bail for Bayliss's reappearance.

Bankruptcies and Failures.

Re J. HUNTER WATTS (trading as J. Hunter Watts & Co.), 39 Seething Lane, E.C., Chemists' Merchant.

THE creditors under this failure met at the London Bankruptcy Court on May 19, before Mr. A. H. Wildy, Official Receiver.

The debtor commenced business originally, in 1871, as a chemists' merchant, dealing mostly in chemicals and colours. He was made bankrupt in 1889, with debts amounting to 2,000*l.* No dividend was paid under those proceedings, and no order of discharge has been obtained. Later he recommenced business as an agent. No purchases or sales were made in his own name, but he received orders from customers and transmitted them to his foreign principals, who invoiced and consigned the goods direct to the buyers, giving the debtor credit for the commission. Debtor had no partner, and, as he acted merely as agent, no books of account were kept. A receiving-order was made against him on May 4, at the instance of a firm of stockbrokers, who claim in respect of shares not taken up when tendered. An action was brought against him in connection with the transaction, and a verdict given for the plaintiffs, but the Judge granted leave to appeal. The debtor, however, was unable to take that step owing to want of means, and he ascribes his present position to that cause. No accounts had been filed, and upon being asked the reason for the omission, the debtor said he had no creditors beyond the petitioning ones, and as he entirely disputed their claim he had no accounts to file. He had recently seen the petitioning creditors, who were willing to settle the matter amicably. The Chairman pointed out that the debtor did not contest the making of the receiving-order, and would consequently have to comply with the regulations of the Court. He would have to attend the public examination on June 6, and unless the usual statement of affairs were filed in the meantime, he would be reported to the Court as being in contempt.

No offer was submitted, and, the case being one of summary administration, it was left in the hands of the Official Receiver to be wound up in the usual manner.

Re WILLIAM BOWNESS, Workington, Chemist and Druggist.

A MEETING of the creditors of William Bowness, chemist and druggist, Workington, was held on Wednesday, May 24, at the office of Mr. Henry E. James, solicitor, Bridge Street, Workington. The meeting was summoned owing to pending proceedings by several creditors, in consequence of which, and to preserve the estate, the debtor had executed a deed of assignment for the benefit of his creditors. It appeared there were unsecured creditors to the extent of 285*l.*, and preferential claims for rent and taxes to the extent of 51*l.* 12*s.* 4*d.* The assets, consisting of the debtor's stock-in-trade, fixtures, fittings, furniture, and book-debts, were estimated at 300*l.* cost price, and to realise by sale only 145*l.*, bearing in mind the peculiar nature of the stock. The debtor made an offer of 6*s.* 6*d.* in the pound, secured, payable in four months, which the creditors present agreed to accept in preference to proceeding under the deed of assignment.

Re JOHN ROGERS, trading as Rogers & Co., 16 Carter Street, Walworth, Medical-box Turners.

UNDER the failure of this debtor accounts have now been issued from the London Bankruptcy Court showing total liabilities 1,252*l.* 5*s.* 7*d.*, of which 637*l.* 5*s.* 7*d.* are expected to rank against assets valued at 15*l.*, less the preferential claims.

The debtor states that he commenced business in 1835; he traded until last Lady-day, when the landlord took possession of and re-let the premises to his (debtor's) son. The failure is attributed to loss on trading caused by foreign competition.

Trade Notes.

WE have received a new prices current of homœopathic medicines, cases, &c., from Messrs. Watson & Wates, 93 Leadenhall Street, E.C.

IT is reported, writes our American correspondent, that Messrs. W. J. Bush & Co., of London, contemplate opening a branch house in New York. Baron de Bush has just been paying a visit to that city, and is now in Chicago.

DR. CHARLES ROOKE (LIMITED).—The directors of the above company have declared an interim dividend for the half-year ending April 30, 1893, at the rate of 10 per cent. per annum, less income-tax on both preference and ordinary share capital.

MESSRS. PERKEN, SON & RAYMENT, 99 Hatton Garden, are offering 100 guineas in prizes for photographs to be taken with their "Optimus" lenses. The competition is divided into nine classes—landscapes, portraits, figures, architecture, &c.—and is to be open until the last day of this year. Rules and conditions can be got from the firm.

JEYES' SANITARY COMPOUNDS COMPANY (LIMITED) have been requested by Colonel Mackinnon, secretary of the National Rifle Association, on behalf of the Council, to carry out the disinfection of the camp at Bisley this year. The Council express great satisfaction with the way in which the work was carried out by the company last year.

THE local committee of the British Medical Association who are arranging the meeting to be held at Newcastle-on-Tyne in August are determined to make the exhibition section a success. This exhibition is the recognised opportunity for the introduction of pharmaceutical goods to the medical profession. Particulars of the conditions are given in an advertisement inserted this week.

IN our note of the names of British firms exhibiting at Chicago, that of Messrs. T. & H. Smith & Co., chemical manufacturers, Edinburgh, was accidentally omitted. Messrs. T. & H. Smith appear in two departments of the British section—viz., that of aromatic and vegetable substances for their coffee essences, aerated waters, &c., and that of chemical products for their pharmaceutical goods.

Personalities.

MR. F. W. FLETCHER (Fletcher, Fletcher & Stevenson) will exhibit, by invitation, his new thermo-hydrometer at the Royal Institution on Friday evening, June 2.

MR. L. KNOWLES, proprietor of the Holborn Drug Stores, 182 Clerkenwell Road, E.C., has been appointed dispenser to the Società di Mutuo Progresso fra gli operai Italiani in Londra.

Sala's Journal has been converted into a limited company, with 20,000*l.* capital. Mr. J. Hertz, of the firm of Hertz & Collingwood, is the managing director. Dr. Russell, the pioneer of war-correspondents, Mr. B. L. Farjeon, and Mr. G. A. Sala, are the other directors.

MR. JOHN BINGLEY, F.C.S., pharmaceutical chemist, Northampton, has been appointed a J.P. for the borough. Mr. Bingley, though appointed by a Liberal Lord Chancellor, is himself a Conservative, but the Northampton Radical paper expresses great satisfaction at this selection.

MRS. AYER, says *Talk*, is a simple, good-hearted American lady, whose late husband made a colossal fortune in the manufacture of "sarsaparilla," and of a speciality known to fame as "cherry pectoral," in the town of Lowell, Massachusetts. She rents the house of the Duc de Menchy, and is credited with the possession of an income of over 400,000*l.* per annum. At the time of her arrival in Paris some few years ago, she was much beset by two needy Russian princes, one of whom, a certain Dolgorouki, was currently spoken of as her affianced husband. But the lady, who is close upon sixty years of age, was too wise to exchange her fortune and her liberty for a title, preferring to spend her money, as she does lavishly, in hospitality and charity.

New Companies.

COUNTY DRUG COMPANY (LIMITED).—Capital 2,000*l.*, in 1*l.* shares. Objects: To acquire the business lately carried on under the style of the County Drug Company, at Holton Road, Barry Dock, and to carry on business as wholesale and retail chemists and druggists, patent-medicine vendors, ships' medicine-chest providers, &c. The first subscribers are:—G. Rutter, Market Chambers, Barry, contractor; J. J. Willetts, 3 Dock Chambers, Cardiff, U.S. vice-consul; W. W. Jukes, 2 Park Place, Barry, drug-store proprietor (one share each); T. Williams, Barry, manager; E. Phillips, Newland House, Barry Dock, contractor (five shares each); G. F. Willett, Cadoxton, clerk; J. A. Hughes, Barry, solicitor (one share each). The above, with the exception of J. J. Willetts, are also the first directors. Remuneration to be determined by the company in general meeting. Registered office, 86 Holton Road, Barry Dock, Glamorgan.

WHEATLEY & BATES (LIMITED), SHEFFIELD.—Capital 150,000*l.*, in 7,000 6-per-cent. cumulative preference shares of 10*l.* each, and 8,000 ordinary shares of 10*l.* each. Object: to purchase the two old-established businesses of J. Wheatley & Son, of the Dantzie and Rutland breweries, Sheffield, manufacturers of aerated-waters, cordial-makers, black-beer and hop-bitters brewers, and wine and spirit merchants; and of Thomas Bates, wholesale ale and stout and hop-bitters bottler. The prospectus states that the profits of the business of Messrs. Wheatley & Son, as ascertained by a firm of accountants, during the last three years amounted to 30,682*l.* 2*s.* 9*d.*, or an average of 10,227*l.* 7*s.* 7*d.*, per annum. This business has been established forty years, and their hop-bitters are sold in nearly all parts of England and in several places abroad, and the demand for it is said to be still growing. The turnover for the last four months shows results 60 per cent. in excess of the same period of last year. The first directors are Messrs. J. R. Wheatley (chairman), O. F. Bates, and E. H. Wheatley, and the preference shareholders will elect two additional ones.

Gazette.

PARTNERSHIPS DISSOLVED.

Bluett & McClew, Leek, physicians and surgeons.
Fowler & Donaldson, Portsea, chemists and druggists.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Hughes, Robert Jaffray, Wimbledon, S.W., physician and surgeon.
Irvine, R. J., York Street, Baker Street, W., doctor of medicine.
Waddington, Joseph Edward, Blackburn, herb-beer manufacturer.

ADJUDICATIONS.

Collyer, Charles Edwards, Thirkell, Horace Vyse, and Bell, Edward Alexander (trading as Collyer, Thirkell & Bell), Fenchurch Street, E.C., produce brokers and merchants.
Lawson, Henry, Sheffield, dentist.
Unwin, Thomas James, Geneva House, Brondesbury, N.W.; Regent Street, W.; and Belgrave Mansions, Belgravia, S.W., in the county of London, perfumer.

QUESTION AND ANSWER.—The Question was No. 9 on the paper. It was: "Describe any way in which the velocity of light has been measured." This was how the scientifically-inclined maiden answered it: "A distinguished but heathen philosopher, Homer, was the first to discover this. He was standing one day at one side of the earth looking at Jupiter, when he conjectured that it would take 16 minutes to get at the other side. This conjecture he then verified by careful experiment. Now the whole way across the earth is 3,072,000 miles, and dividing this by 16 we get 192,000 miles a second. . . . P.S.—I think the gentleman's name was Homer, not Homer; but anyway, he was 20 per cent. wrong, and Mr. Fahrenheit and Mr. Celsius afterwards made more careful computations."

NOTICE.

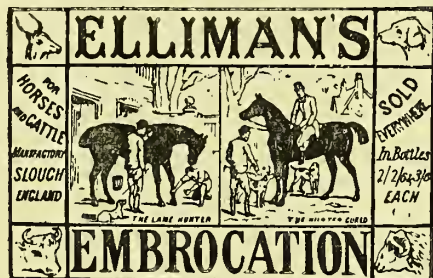
The Trade are respectfully informed that from June 1 next all prices charged for "Sanitas" Preparations and Appliances will be made out *net*, in accordance with the Revised Trade Price List, which may be had on application.

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would undertake one or two additional
agencies for patent Medicines, Sundries, etc.
Special connexion amongst Doctors
in Paris & Provinces.

British Medical Journal.

"WE HAVE COMPARED TINCTURES, &c., MADE FROM FLETCHER'S CONCENTRATED LIQUORS WITH SIMILAR PREPARATIONS MADE EXACTLY ACCORDING TO THE B. P. METHODS, AND WE FIND THAT THEY ARE PRACTICALLY IDENTICAL IN CHARACTER."

Editorial Comments.

PREPARATIONS OF POISONS.

THE difficulty of defining with anything like legal accuracy the exact limits of the poisons schedule has been lately reproduced in France very much after the English model.

SILICATED CARBON FILTERS



PATENT SELF-AERATING
MOVEABLE BLOCKS

WORKS, BATTERSEA LONDON. S.W.

Judges and Magistrates have always been chary of extending the poisons schedule of the Pharmacy Act beyond what it expressly includes. If it declares that opium is a poison, they have been slow to admit that opium and something else is a poison also. The Judges in the recent famous chlorodyne case carefully limited their decision to the instance before them. The French case was briefly this. Towards the end of last March a midwife of Beauvais, who was attending a recent *accouchée*, wrote a prescription for 10 grammes of laudanum. This was duly supplied by a pharmacist, and two days later the grandmother of the lately-born baby, mistaking the laudanum for syrup of chicory, gave it several grammes of the drug, the death of the infant being the result. Both the midwife and the pharmacist were prosecuted by the police on the charge of homicide by imprudence. The midwife was accused of illegal practice of medicine by issuing a prescription, and the pharmacien was charged with having supplied a poisonous substance without a doctor's prescription. The midwife's defence was that, being authorised to give, in the exercise of her profession, all ordinary attention to patients, she considered herself justified in prescribing the necessary medicines. The pharmacist raised a more delicate point. The royal decree of October 29, 1846, concerning poisonous substances makes no mention of laudanum. It names opium, no doubt, but in the case of several other products—such as arsenic, for instance—the words “and its preparations” are added, but nothing similar is said about opium. The question appears to be new in French jurisprudence, the Court of Cassation having only examined it as regards hydrochlorate of morphia, which, coming under the definition of “vegetable alkaloids and their salts,” is prohibited for sale without a doctor's prescription. The question, therefore, presented to the Beauvais Court was whether the prohibition to pharmacists to deliver poisonous substances is applicable only to those mentioned in the list, or whether it refers also to compounds of these substances. Amongst the witnesses for the defence were MM. Chastaing, Professor at the School of Pharmacy, and Villejean, chief pharmacist of the Hôtel Dieu Hospital. Both stated that, in their opinion, pharmacists could deliver laudanum and midwives prescribe it. One of them even added that in the course of his lectures to the latter he taught the use of the drug. M. Chênebenoit, for the prosecution, argued that in any case pharmacists cannot, in virtue of the initial law on pharmacy of Germinal 21, Year XI., deliver any compound medicament without a prescription. Laudanum, he said, was comprised in this category. Besides, the decree of 1846, issued for the protection of the public, could not intentionally have excluded substances so eminently poisonous simply because they were compounds. With this interpretation the law in question would be almost always inapplicable, medicaments being rarely delivered in a simple state. Laudanum must therefore certainly, he held, come within the meaning of the law, opium being its essential element and the others more or less indifferent. The Court, under the presidency of M. Gaillard, found the pharmacist and midwife guilty of homicide by imprudence and non-observation of the regulations; but, believing they had acted in good faith, a fine of 16*f.* only was inflicted, sentence being postponed under the First Offenders Act.

Thus, therefore, in France, as well as in this country, Courts of Justice have refused to accept a pedantic limitation of a law passed for the public protection. They have held that if a poison be sold in combination with something else, and called perhaps by some other name, it is still the same scheduled poison in the eye of the law. They have not yet been asked, and perhaps never will be asked, in either country to interpret the law in an equally

pedantic fashion in the other direction. It is possible, for example, to hold that a mixture made up with chloroform-water should be labelled “Poison.” We hope the Pharmacy Act will never be strained to such a ridiculous degree or to anything like it. It is the duty of pharmacists to insist on the Pharmacy Act being respected throughout the kingdom, but it is certainly not their duty or their interest to render it absurd by a too servile obedience to its letter rather than to its spirit.

APPLIED CHEMISTRY.

It appears to be the fate of pure chemistry that once in every generation or so it should be differentiated into what is pure and what is applied. Than this fact there could be no better argument for the abstract researches and philosophical speculations of those chemists whose minds are far above the applications and technicalities of the science. For historical data conclusively prove that much of what is abstract science in one generation becomes a feeder of the applied art in another, whatever the original intent of the workers may have been. It is true that the two elements never part company altogether, nor can that be the case, and it has never been better shown than at the present time that pure and applied chemistry are interdependent.

We have an excellent example of the truth of the foregoing in the completion of “The Dictionary of Applied Chemistry,”* edited by Professor Thorpe, of the Royal School of Science. This dictionary is a technical off-shoot from Watts's ponderous work, which in its turn was an off-shoot, on the pure chemistry side, from the semi-abstract, semi-technical work of Ure, and we cannot go far beyond Ure before we come into nodding distance with the chemists who had not shaken off the influence of their progenitors the alchemists. These men had scarcely got within the threshold of the science, and were more intent upon producing chemicals for the use of man than for building up theories. That they succeeded in doing both we have a large legacy to keep us from forgetting. We may, therefore, regard the completion of Professor Thorpe's work as, in a sense, the beginning of a new stage in chemical knowledge. It is a highly meritorious work in which the Professor and his colleagues have been engaged. Without entirely subjugating pure chemistry they have succeeded in presenting chemists with complete monographs of all the chemical industries of modern times; they have made sound expositions of those principles which have application in the industries, and they have retained the usual oyclopædic matter (which to a great extent—we may say, to the greater extent—applies to medicine and pharmacy) in a condensed and generally improved form.

The three volumes contain 2,487 pages of text, with several hundred engravings of machinery and apparatus. The “eminent contributors” have written 296 special articles, many of which are long enough to form books in themselves. The editor, however, has done the bulk of the work, and a large number of articles of a special character, not enumerated in the above, are from his pen. To pharmacists the dictionary is one of exceptional value, and their needs appear to have been taken into consideration at its inception, for several of the contributors are or have been connected with pharmacy. The articles on the more important drugs have throughout been written by Dr. Alfred Senior, at one time demonstrator to Professor Atfield, and assistant secretary of the Pharmaceutical Conference. Dr. Senior shows in his articles that he keeps very closely in touch

* Vol. iii. Oakbark to Zymurgy. Royal 8vo. 1,053 pp. Longmans, Green & Co. 63*s.*

with the progress of pharmacy. All his facts are up to date, and his writing is terse yet comprehensive. In the third volume, Professor Tilden writes on essential oils, resin, and terpenes. The first of these is exceedingly disappointing, and gives one the impression that the author is not *au fait* with the progress in the pharmaceutical section of the subject. Some important oils are treated very briefly, and with little reference to their sophistication; indeed, the use of petroleum in this direction is not mentioned at all. Several of the better-known oils—sandal-wood oil amongst them—are not dealt with, and the references to the composition of some that are named look almost like ancient history, in the light of the researches of the past few years. We turn from this article to that on “fixed oils,” with a sense of expectancy, for the writer of it, Mr. A. H. Allen, is invariably thorough. In this article we have a clever grouping of the commoner oils of commerce, in respect to all the processes through which oils go before they are placed on the market, the physical and chemical characteristics of the oils, their behaviour when pure and mixed; in fact, almost everything which the chemist requires to know about fixed oils and fats seems included in the article. Another article which will attract attention is that on vegeto-alkaloids, by Mr. W. R. Dunstan, “Professor of Chemistry at St. Thomas’s Hospital,” according to the dictionary, but whom chemists are accustomed to regard as one of the Pharmaceutical Society’s professors. The article is one of the best in the dictionary, showing intimate knowledge of the subject, mastery of the methods for isolating and testing alkaloids, appreciation of what information such a book should contain, so that the smallest factors likely to influence the identity of an alkaloid are included, and the whole is graphically put down. The only thing which mars the monograph is the writer’s inexplicable contempt for workers who have dealt with a subject contemporaneously with himself. It thus happens that we look in vain for reference to the work of Richards and Rogers, and of Ehrenberg and Purfürst on the aconite alkaloids. This contempt for co-workers does Professor Dunstan more harm than good.

Amongst other contributors to the dictionary whose names are familiar in pharmacy are Mr. Robert Warrington, who has written several agricultural articles and on citric and tartaric acids; Mr. Boverton Redwood, who writes on Russian petroleum and petroleum-testing, the article on American petroleum being by Professor Sadtler, of Philadelphia; Mr. John Heron, secretary to the London Section of the Society of Chemical Industry, writes articles on Brewing, Saccharimetry, &c.; Mr. Stanford wrote an article on Iodine for the second volume, and Mr. B. H. Brough, son of Mr. John Cargill Brough, who for some years edited this journal, wrote on Fuel. It will thus be seen that, without extending the list of contributors to those less familiar in pharmacy, the dictionary is one in which pharmacists have a special interest, and the contents make it, on the whole, a more suitable work of reference than the new Watts’s “Dictionary” for use in their shop-libraries. For example, the articles on dyes of all kinds, on the various products of the alkali industry, on paints, tea, varnishes, sugar, borax, minerals, phosphorus, petroleum, water, and many other subjects are less of the theoretical and more of the practical nature than those in Watts’s. It is a more readable book, too, owing to Watts’s being written in a condensed style, which is very puzzling.

The chief objection we have to Professor Thorpe’s dictionary is the unequal character of the special articles. Perhaps it is a sacrifice that we must make when “eminent contributors” are engaged that their articles must be taken as they give them. It is always the case that some eminent

men rest upon their laurels when they attain their eminence. Unfortunately, Professor Thorpe has caught a few of that sort in his net, and his dictionary is so much the worse in consequence. But the younger race of contributors, and most of those who would still like to be young, have grasped the true intent of the work and have contributed articles of high merit, and all as much after one model as it is possible for varied subjects to be. These redeem the dictionary from what are, at the worst, removable blots, and leave us with the impression that this country has no reason to be ashamed of its exponents of Applied Chemistry.

THE INSECT-FLOWER MARKET.

By a fortunate dispensation the season of the year when the gay and festive insect tribe begins to revel in the exercise of their new-born and short-lived irritating powers coincides with that when the principal agent for the destruction of these busy legions ripens for the harvester. The Austrian province of Dalmatia and the neighbouring State of Montenegro provide our druggists with those unassuming yellow flowers that of all the insect-killing varieties of the chrysanthemi are the most deadly—viz., those of the *Chrysanthemum cinerariaefolium*, the Dalmatian insect-flower of commerce.

There does not seem to be any good reason why Dalmatia should for years have preserved a practical monopoly of the production of this important drug, but the fact remains nevertheless that, so far as can be judged, Trieste will for many years continue to be the one market to which buyers from all parts of the world will resort for their purchases of the drug, which represent an average annual value of from 40,000*l.* to 50,000*l.* The insect-flower plant is easy of cultivation and adapts itself readily to many kinds of soil and climate. Within the last three or four years we have heard of moderately successful efforts to cultivate it for commercial purposes in Australia, South Africa, and California, and we believe that it is now actually grown upon what is intended to be a wholesale scale in the neighbourhood of Berlin. But at present all these efforts remain insignificant when compared to the Dalmatian industry. To most pharmacists, therefore, the announcement that the Dalmatian insect-flower crop is just about to be gathered is of considerable interest, and it may be worth while to consider the prospects of the article and to estimate the chances of a further rise than that which has already occurred.

About a month ago the low price of the flowers, together with the smallness of the stock left in Trieste and the prospects of a hot and dry summer, began to attract the attention of speculators, and since then prices have gradually risen, until at the present moment good closed flowers, which in November last were being offered at about 50*s.* per cwt. f.o.b. Trieste, are worth 85*s.* per cwt. f.o.b., while other varieties have advanced in proportion. This considerable increase in value, even before the gathering of the new flowers has fairly commenced, is no doubt mostly the work of speculators, and if the new harvest should turn out moderately satisfactory (in spite of the reports that it is not likely to surpass one-third of an average crop) the present quotations are already quite as high as circumstances warrant. It is possible, on the other hand, that American houses may continue to send over large orders, and as the United States is the best individual customer of Trieste its purchases may considerably affect the market, at any rate for a while. It may here be pointed out that the spring-season in the States has thus far been the coldest known for a generation, and its backwardness may to some extent have caused the American houses to buy less freely than they

would under normal conditions. The small stock which remained in the Triëste warehouses at the commencement of the season has also been pressed into the service of the speculators as an argument for higher rates; but, unfortunately, the Triëste statistics take no account of the supplies in the hands of growers and dealers in the country, and it is a notorious fact that in former seasons speculators have often deluded buyers into a misplaced confidence in the drug by feeding the Triëste market very sparingly and keeping back the bulk of their holdings in the interior until their customers had provided themselves at the artificial high quotations.

The earliest period at which the newly-gathered flowers have been brought to market in Triëste has been the middle of May, but the season is generally calculated to begin on June 1. It has been stated in nearly all quarters connected with the trade that the crop this season has suffered severely from the severe weather in the early part of the year, but as the insect-flower is a hardy plant, too much attention need not be paid to that assertion. A more weighty claim for higher prices is that during the last four or five years the price of insect-flowers has declined to such a level that the cultivation no longer pays, and that, on this account, many growers have taken advantage of the circumstance that the plant ceases to bear at the end of three years to turn their chrysanthemum-plantations into vineyards or tobacco-fields. This assertion is well supported by facts—witness the following figures showing the quotations for insect-flowers on the Triëste market (in Austrian florins per 100 kilos.) on February 1 of the last seven years:—

—	Closed flowers	Half-open flowers	Open flowers
	Florins	Florins	Florins
1887	190	170	150
1888	300	260-270	235-235
1889	270	230	183
1890	180	110	80
1891	100-135	63-80	56-58
1892	80-100	58-75	52-54
1893	65-80	55-60	46-52

The figures for 1888 are the highest on record with the exception of those for November, 1887, when closed flowers advanced to 320fl. in Triëste. But that was owing to many exceptional circumstances, and since then the tendency of the market has uniformly been downward.

A few more figures will probably be welcome to buyers who are anxious for an opportunity to obtain a fair bird's-eye view of the position of the article. The total quantity of flowers of all descriptions brought to market in Triëste from June 1 to May 31 following has been—

	1835-6	1836-7	1837-8	1838-9	1839-90	1890-1	1891-2
Tons ..	660	576	478	399	882	859	665

This season, up to February 28, the arrivals amounted to 616 tons, and will therefore, in all probability, by the end of May almost equal those of the season 1891-2. These figures may be taken to represent the entire Dalmatian insect-flower crop—viz., the cultivated flowers from the Ragusa and Città Vecchia districts, and the wild ones from the Montenegrin hills, which are the most esteemed and the dearest, but of which the supply is comparatively small. The Triëste stocks at the beginning of the season (June 1) are officially stated to have been as follows during the last ten years:—

	1884	1885	1886	1887	1888	1889	1890	1891	1892
Tons ..	132	140	94	23	9	16	110	204	243

At the end of February of this season there were 115 tons in stock. The figures which we have given show that the produc-

tion during the last four seasons has been above the normal point, and that, unless the consumption of the drug is largely on the increase—of which there is no proof—there must have been an excess of production over consumption since 1889-90. Hence it follows that, although the present stock in Triëste is a very moderate one, scattered supplies probably exist in other places, which, together, would form a not inconsiderable total.

THE POISON TRADE.

It is quite legal for a chemist to sell any quantity of laudanum to any customer who asks for it. That we all know. But we report, with some regret, the circumstance that in many different places last week customers were able to buy rather considerable quantities, apparently from chemists' shops, with extremely little difficulty. Two purchases of sixpennyworth, one of ninepennyworth, two ounces, and other poisonous lots, all made by persons with suicidal intentions, must suggest to the casual reader that chemists part with their deadly possessions with singular ease.

We notice that Mr. Braxton Hicks has been requested by a jury to bring before the Home Office the subject of the facility with which laudanum can be obtained in quantities far more than sufficient for suicidal purposes. Mr. Hicks will, in all probability, act on the suggestion of the jury. It will be found extremely difficult to formulate any provision which should ensure the safety of the public in this respect without occasioning unreasonable inconveniences, and we fancy the public will have to rely, after all, on the discretion and humanity of pharmacists. That this is exercised in hundreds and thousands of cases annually we all know, but it is the exceptional occasions which come under public notice.

Another Coroner, Dr. Churton, of Birkenhead, has, we are glad to observe, intimated his intention to bring the subject of the free sale of carbolic acid under the notice of the Home Secretary.

NEWSPAPER FORMULÆ.

The *People's Journal*, a popular weekly paper published at Dundee, in last Saturday's issue, supplies its 200,000 readers with the following astonishing formula for potash-water:—

Ingredients: 1 lb. carbonate of potash (salt of tartar); 1 gallon boiling water; $\frac{3}{4}$ fresh-slaked lime, dry. Put the potash salt into a stoneware jar or glazed vessel that will not crack, and pour on it the boiling water cautiously; then add the lime, and bung up and give frequent shakings to the mixture until the whole has become cold; then allow the solution to clear, and decant the clear fluid and put in clear-glass well-stoppered bottles.

It is to be hoped that the bottles will be so exceptionally well-stoppered that nobody will be able to open them. In the same issue of the journal we find corrosive sublimate and acetic acid recommended for household purposes in the coolest manner with no suggestion of their dangerous nature. If the chemist does not look carefully after the public safety when he supplies the chemicals prescribed, the omniscient journalist will come down on him heavily; but the latter scatters his deadly advice about with the utmost recklessness, and nobody can stop him.

DEVELOPMENT OF AFRICAN RESOURCES.

An enterprising street-hawker in Liverpool has been disposing of a quantity of cashew-nuts (*Anacardium occidentale*) by means of an announcement on a handbill, as follows:—

African Latest Discovery is known as the African water-plant or Syrius bulb, and was first discovered growing in the Lake Unnenganda in South Africa in 1893. Will grow a beautiful vine to any height in a glass or jar of water, but will not grow above the water—should be kept

always covered with water. A large variety of blossoms first consignment just arrived. As there is only a limited quantity they will become very valuable. By the representation of the African shipper they will give great satisfaction to the public. The variety of colours are white, pink, yellow, red, blue, and purple. Directions for growing:—Place the bulb in a jar of water—it will float for five or six days (some of them will sink to the bottom at once). Change the water frequently as they live on the oxygen in the water. Retail price 6*d.* each, or six assorted colours 2*s.* 6*d.*; to be had from the importer, wholesale.

PHARMACY IN MASSACHUSETTS.

The State of Massachusetts ranks pretty high in culture, as the New England States go, but pharmacy there does not appear to be particularly bright. The Board of Registration, last year, examined (we quote from the *Pharmaceutical Era*) 488 candidates, and of these 341 failed. The ignorance of some applicants is shown by the following questions and answers:—

What is ergot?—It is a root. (Another answer: The kernel of rye.)

What do deut., bin., and hypo., as prefixes signify?—Deuto. is single, bin. is single, hypo. is double.

How would you make pills of nitrate of silver?—Soap would be a good excipient.

What are nufgalls?—A fruit of some plant.

Name the official preparations of mercury.—Ointment of mercury; don't think of any other.

What is calomel?—A mercuric chloride.

What is kino?—A cathartic gum.

What is a gum?—An aqueous solution of fatty substances.

What is the source of opium?—Dug from the ground. Judge so from its appearance, resembling balls like potatoes.

The ethical standard of some of the trade is quite on a level with the ignorance of the aspirants. Following a no-licence vote, ex-saloonmen seek, and sometimes get, the aid of a registered pharmacist at a liberal compensation, to open a drug-store, that the drink-saloon business may be continued under the protection and guise of a pharmaceutical licence.

THE PASSION FOR PHYSIC.

There was once a theory that nobody would take medicine who could help it, or who absolutely required it, and that then the unfortunate invalid took as little as possible. This was a prominent argument against price-cutting in the medicine trade when the scalper first came our way. The theory has been exploded now everywhere. Everybody knows that there is no luxury which so promptly tempts the masses as physic. That this passion is in no way modified by anti-popean conditions or climate is evidenced by an item which reaches us from New Zealand. A Dunedin friendly society has published some facts from its dispensary records. It is one of those institutions which supplies medicines for a fixed annual subscription. This is how the system works there. One regular customer, apparently in good health, has had 172 prescriptions made up in two years. A girl under 20 years of age, bought 1,296 iron pills in six months, also six boxes of seidlitz-powders, and two other girls had 2,312 iron pills between them in the same period, the three of them having jointly swallowed, in half a year, about enough metal to make a saucepan. But the best customer of all is an apparently sane woman, who has used 25 lbs. of Glauber's salts in six months, and is keeping it up at the same rate. These instances could, no doubt, be matched in this country, otherwise how could all the great physic-factories keep going?

THE FLORA OF THE PHARAOHS.

The oldest herbarium in the world is in the Egyptological Museum, Cairo. It contains a large number of plants, dried

5,000 years ago, and recovered from sarcophagi. The colours of most of the specimens are excellently preserved. By soaking the plants in warm water, pressing, and re-drying, they are rendered suitable for herbarium purposes. Among the plants most commonly used by the ancient Egyptians for the decoration of the dead were the white and the blue lotus, the red poppy, the flowers of the pomegranate, safflower, *Chrysanthemum coronatum*, and mallow flowers, as well as the leaves of the celery, the onion, and the leek. Many of the plant-remains were identified by Schweinfurth, the African traveller, and a special treatise on the Pharaonic flora has recently been written in French by V. Loret, and published in Paris.

INFLUENCE OF ALKALOIDS ON PLANTS.

The influence of certain poisonous alkaloids upon plants has long been a matter of interest to botanists. As far back as 1834 Goppert made some experiments upon cereals and leguminous plants with infusion of belladonna, as well as with atropine, and discovered nothing of much account; but in 1865 P. B. Reveil repeated the experiments under better conditions, and with better results. He found that a solution of atropine sulphate stimulated the germination of barley, but since then another observer has stated that the result is the opposite. Whether the effect is good or bad, it is noteworthy that there is an effect, and taking up the matter in true scientific spirit Henry de Varigny has made an investigation with gratifying results. Growing the seeds in soil-less media (sand or cotton-wool) he watered them with atropine-sulphate solution varying in strength from .06 to 1 per cent. Wheat, oats, barley, grass, cress, lettuce, radish, turnip, and many other kinds of seeds were used, and every means taken to check the experiments. The results clearly show that the influence of the atropine was generally bad rather than good. Thus in the case of Indian cress the weight of the crop without atropine exceeded the weight of the crop with it, and the greater the amount of atropine used the smaller the crop. In regard to wheat, of seventy-five seeds sown sixty-nine germinated with water alone, but only thirty-nine with 0.2 per cent. atropine solution. And so with others, lettuce and carrots being the only seeds which were materially benefited. Generally, therefore, it may be said that atropine acts as a poison to plants, just as it does to animals.

AS OTHERS SEE US.—

Mr. Squill and I were talking
(He's a chemist, I'm a hatter),
Came a sobbing urchin walking
To the counter. "What's the matter?"
"Mother's ill; the doctor ordered
This prescription; please, sir, make it."
Mr. Gill mixed up a bottle,
Wrote upon it how to shake it,
Tied it carefully in paper
(For our chemist neat and nice is),
Gave it to the little urchin;
"One-and-three, my child, the price is."
Gone the boy—upon the counter
There was only threepence lying;
To the doorway rushed the chemist,
Hands outstretched, and coat-tails flying;
Mr. Gill is fat and heavy;
He came back all red and blowing;
"Little rascal, he has vanished,
Where he's gone to there's no knowing!
After all, I have the threepence
(In the till he went to drop it);
Though I haven't got the *shilling*,
I have still got *treopence profit!*"

New Zealand Journal

NOTES ON PRACTICAL DISPENSING.

THE following is an abstract of the Liverpool Pharmaceutical Students' Association's Prize Essay, written by Mr. H. S. Coupland.

MISTURA OLEI RICINI.

The formula in the Pharmacopœia for making this mixture has undergone a good deal of criticism, both as to the ingredients and the method of mixing them. It is considered by some that liquor potassæ is not the best emulsifying agent that could have been employed, because it chemically combines with part of the oil. In following the official directions, the alternate thickening of the mixture by the potash and thinning by the orange-flower water make it difficult for any but an experienced manipulator to produce a good emulsion. An easier and better method is to dilute the liquor potassæ with about twice its bulk of the orange-flower water, and with this emulsify the oils; to this add the syrup, afterwards making up to the required volume with orange-flower water. It may be made either in a mortar or by shaking in the bottle. In cold weather it is an advantage to warm the ingredients slightly, because the oil is thus rendered thinner and more easily incorporated.

A very good castor-oil mixture can be made by using almonds as an emulsifier. Half an ounce of almonds will emulsify $\frac{1}{2}$ oz. of castor oil. The albumen and mucilage contained in the seed are very effective in this respect. The almonds should be beaten into a pulp with a little water, afterwards adding more water to form a thin paste; the oil can then be added gradually with constant trituration, afterwards water to the required volume. If sweetened with sugar, this makes quite a palatable mixture, and is very presentable. It may be made according to the following formula:—

Olei ricini	..	..	..	..	5ij.
Amygd. dulc.	..	..	..	..	5ij.
Syrupi	..	..	..	..	℥j.
Aqua ad	..	..	..	..	℥j.

If required, a larger proportion of oil can be used, as the mixture is fairly thin.

Gum acacia is a well-known substance for emulsifying castor oil. The powdered gum is, perhaps, the most convenient form. It may be placed in the mortar, the oil and an equal bulk of water added at once, and stirred till emulsified, afterwards adding water gradually to the required volume.

Olei ricini	..	..	..	..	5ij.
Pulv. acaciæ	..	..	..	..	gr. xxx.
Aqua ad	..	..	..	..	℥j.

Some oil will, perhaps, require a larger proportion of gum than this.

Yolk of egg will also make a very presentable mixture with castor oil, of which it will emulsify double its own bulk.

Olei ricini	..	..	..	..	5ij.
Vitelli ovi	..	..	..	..	5ss.
Aqua ad	..	..	..	..	℥j.

The best method is to triturate the yolk in a mortar with its own volume of water, take of this mixture a volume equal to that of the oil to be emulsified, and triturate them together until union is effected, afterwards adding water to the required volume. Chloroform-water may be added, if desired, to preserve the mixture.

Another alternative is to employ tincture of senega. The senegin contained in the latter has the power of emulsifying the oil very effectually. The mode of procedure is to triturate the oil with the senega in a mortar until combined, then add the water gradually with constant stirring. A very good emulsion is formed.

Olei ricini	..	..	..	..	5ss.
Tinct. senegæ	..	..	..	..	℥j.
Aqua ad	..	..	..	..	℥j.

An advantage of this emulsifying agent is that it forms a comparatively thin mixture with the oil, so that a larger proportion of the latter can be incorporated by it than by most other agents.

Of the above five mixtures the most preferable is that made with almonds. It is superior to the potash because there is no chemical combination; to the yolk of egg because it will keep longer, and is more presentable, being a white emulsion, while the latter is yellow; and to the acacia and senega mixtures, as also to the others, because it is more palatable. The egg emulsion appears to be next in order of desirability. It is very presentable, though yellow in colour, and is easily digestible. One disadvantage is that it cannot be kept many days without decomposing, unless some preservative be added. As castor oil, however, is not generally ordered in large quantity, being a medicinal agent of which not more than two or three successive doses are usually taken, this drawback in the present case is of comparatively little importance. The acacia and senega both make good emulsions with the oil, and there is in point of appearance little to choose between them. The senega mixture is perhaps the thinner and more presentable of the two, but that with acacia may perhaps be preferred, because, although neither of these agents is likely to have a deleterious effect, the acacia is the more inert of the two. All the emulsions can be flavoured as desired.

MISTURA MENTHOL.

Owing to the fact that very little water will cause menthol to separate from its solution in spirit, it is best administered in the form of an emulsion. A good mixture may be made with one of three agents: acacia, yolk of egg, or tincture of senega.

For the acacia mixture powder the menthol finely, mix it intimately with the powdered gum, and add the water gradually. A very good emulsion is formed.

Menthol	..	..	..	..	gr. viij.
Pulv. acaciæ	..	..	..	..	gr. xxiv.
Aqua ad	..	..	..	..	℥j.

The same mode of procedure will answer for the emulsion with yolk of egg; it is an advantage to use a little chloroform-water.

Menthol	..	..	..	..	gr. viij.
Vitelli ovi	..	..	..	..	5ss.
Aq. chlorof.	..	..	..	..	5iv.
Aqua ad	..	..	..	..	℥j.

If employing tincture of senega, it is better to dilute the tincture with twice its own volume of water before triturating with the powdered menthol, because if the undiluted tincture be added first, and water afterwards, the menthol is very likely to separate, possibly owing to its being partly in a state of solution in the spirit instead of being emulsified.

Menthol	..	..	..	..	gr. viij.
Tinct. senegæ	..	..	..	..	5ss.
Aqua ad	..	..	..	..	℥j.

Of the above three emulsions that made with acacia seems, on the whole, to be the best. It is thinner than the others, and when the mixture has separated into two layers, on standing, it is more easily rendered homogeneous by shaking. The senega mixture is the next best.

MISTURA TEREBINTHINÆ.

This may be made with the same emulsifying agents as menthol, and more easily and quickly. The acacia mixture may be made in a mortar with the powdered gum, or by shaking in a bottle with acacia mucilage. The former method is perhaps to be preferred, and is carried out as follows:—Place the gum in a mortar, float the turpentine on its own bulk of water, pour the whole on the gum at once, and stir till emulsified, afterwards adding remainder of water in successive portions.

Olei terebinth.	..	..	..	..	℥j.
Pulv. acaciæ	..	..	..	..	gr. xx.
Aqua ad	..	..	..	..	℥j.

In the case of the senega, dilute the tincture with a little water in the bottle, add the turpentine, and emulsify by shaking; lastly, add water to the required volume.

Olei terebinth.	..	..	..	..	℥j.
Tinct. senegæ	..	..	..	..	5ss.
Aqua ad	..	..	..	..	℥j.

The yolk of egg is best diluted by trituration with water;

the emulsion may then be made in the mortar, or the diluted yolk may be poured into the bottle, the turpentine added, and the remainder of the water added gradually.

Olei tereb.	..	..	..	..	5j.
Vitelli ovi	..	..	..	..	5ss.
Aqua ad	..	..	..	..	5j.

The last emulsion is perhaps the best; the emollient properties of the fatty oil in the yolk of egg would most probably prevent the turpentine from exercising an irritating effect.

YOLK OF EGG AS AN EMULSIFYING AGENT.

Where it is used as a nutrient, yolk of egg is comparatively seldom presented in emulsions. An exception occurs in mist. sp. vini gallici of the B.P.; the B.P.C. have also adopted it in combination with tragacanth to emulsify cod-liver oil. It is an excellent emulsifier of essential and fixed oils, oleo-resins and resinous tinctures. It has, however, one disadvantage: where there is no preservative present in the mixture one must be added if the mixture is required to be kept long. It will emulsify cod-liver oil perfectly without the aid of tragacanth. Three examples are appended:—

Olei morrhue	..	..	..	..	5ss.
Vitelli ovi	..	..	..	..	5j.
Aque chlorof. ad	..	..	..	..	5j.

Olei eadimi	..	..	..	..	5j.
Vitelli ovi	..	..	..	..	5j.
Aq. chlorof.	..	..	..	..	5iv.
Aqua ad	..	..	..	..	5j.

Copaiba	..	..	..	..	5ij.
Vitelli ovi	..	..	..	..	5j.
Aq. chlorof. ad	..	..	..	..	5j.

It may be conveniently kept for use triturated with an equal volume of chloroform-water. It will then keep a reasonable time without decomposing.

CARBOLIC ACID IN PILLS.

The formula which appears to give the best results is the following:—

Acidi carbolici	..	..	..	..	gr. j.
Pulv. glycyrrh.	..	..	..	..	" ij.
Ext. glycyrrh...	..	..	..	..	" ʒ
Ft. pil.					

A better pill is made in this way than with soap, and it has an advantage in the fact that there is no chemical combination. The pills keep well, and do not become hard. The same excipients will answer for acid. carbol. in combination with bism. subnit.:—

Acid. carbol.	..	..	..	..	gr. j.
Bism. subnit.	..	..	..	..	" iiij.
Pulv. glycyrrh.	..	..	..	..	" iss.
Ext. glycyrrh...	..	..	..	..	" ʒ
Ft. pil.					

ESSENTIAL OILS IN PILLS.

Soap is generally used in these cases; for example:—

Olei sabine	..	..	..	..	ʒiv.
Saponis..	..	..	..	..	gr. ij.
Tragac...	..	..	..	..	" ss.
Glycyrrh. pulv.	..	..	..	..	" viij.
Aque ..	..	..	..	..	mij.
Ft. pil. iv.					

Croton oil can be combined as follows:—

Olei crotonis	..	..	..	..	gr. v.
Saponis ..	..	..	..	..	" v.
P. acacie	..	..	..	..	" ij.
P. tragac.	..	..	..	..	" ij.
P. althae	..	..	..	..	" ij.
P. succh...	..	..	..	..	" ij.
Ft. pil. iv.					

A good formula for creosote pills is the following:—

Creosoti ..	..	..	..	..	ʒiv.
Tragac. ..	..	..	..	..	gr. ij.
Glycyrrh. pulv...	..	..	..	..	" vj.
Cere flavæ	..	..	..	..	" iv.
Ft. pil. iv.					

These do not becoming hard by keeping.

Liquorice powder and extract answer well for reduced iron:—

Ferri reduct.	..	..	..	..	gr. xij.
Pulv. glycyrrh.	..	..	..	..	" iv.
Ext. glycyrrh.	..	..	..	..	" iv.
Aque ..	..	..	..	..	m ij.
Ft. pil. iv.					

SOLUBLE COPAIBA.

This can be made by treating copaiba with a strong solution of carbonate of potassium, and allowing the mixture to stand for some time, shaking occasionally. Part of the potassium combines with the copaivic acid of the resin, and part settles as bicarbonate to the bottom of the bottle, leaving the copaiba clear. Thus treated, it is miscible with water, forming an emulsion without the aid of any emulsifying agent.

WILLS OF DECEASED CHEMISTS.

The will, dated September 11, 1890, of the late Mr. Isaiah Bevan, of Bradbury Hall, Llanelly, manufacturing chemist, who died on January 17 last has been proved by the executors Mr. John Bevan and Mr. William Bevan, the father and brother of the deceased. The testator bequeaths and devises the whole of his property, real and personal, in trust for the use and benefit of his wife during her widowhood, with remainder to their children. The value of the personal estate and effects was sworn under 25,000*l*.

The will of the late Mr. Joseph G. Downing, pharmaceutical chemist, of Braintree, who died on December 8, 1892, has been proved at Ipswich Probate Registry by Mrs. Anne Downing, the deceased's widow and sole executrix. The gross value of the personalty, exclusive of freehold property, amounts to 1,520*l*. 16*s*. 8*d*. The testator gives to his wife for twenty-one years after his death power of appointment over such portion of his real estate as is copyhold. The residue of his property, real and personal, he leaves to his wife.

The will of the late Mr. J. B. Entwisle, chemist and druggist and dentist, of Liverpool, who died on December 26, 1892, has been proved at the District Probate Registry by Mrs. Elizabeth Entwisle, the widow and sole executrix, to whom administration has been granted, and by whom the gross value of the personalty was sworn to amount to 1,505*l*. 9*s*., the net value being 43*l*. 13*s*. 3*d*. The testator leaves his business at the disposal of his widow, and constitutes her universal legatee for life, with remainder to their children equally.

The will of the late Mr. Alfred Hill, of 27 Oxford Street, Heigham, Norwich, chemist and druggist, who died on August 13, 1892, has been proved at Norwich Probate Registry by the deceased's widow and sole executrix, Mrs. Susannah Hill, to whom the testator devises and bequeaths the whole of his estate, real and personal. He devises that, after the death of his widow, the furniture and household effects generally shall be equally divided among his children. The value of the personalty was sworn under 850*l*. This sum does not include freehold, and there is no leasehold property.

The will, with a codicil, of the late Mr. Thomas Howard Lavers, pharmaceutical chemist, of 12 Belmont Hill, Lee, Kent, who died on January 23 last, has been proved at the Principal Probate Registry by the acting executor, Mr. Thomas Francis Lavers, chemist, 28 Montpelier Vale, Blackheath, son of the deceased, power being reserved to Mrs. G. S. Lavers, the widow, and Mr. Frederick Lavers, another son, to prove hereafter. The gross value of the personalty amounted to 2,939*l*. 18*s*. The testator, whose will is dated in 1879, leaves his furniture, plate, and consumable stores to his widow; a legacy of 19 guineas to his son, Frederick; a policy of 200*l*. upon his life to his daughter, Ellinora Maria, if living with testator, unmarried, at his death. The residue of his property, real and personal, he leaves to his executors, in trust (empowering them to settle with his partners in business at discretion, and to grant leases for building purposes), for the benefit of his wife for life, with remainder to their children. By the codicil, dated in 1891, the testator leaves an immediate legacy of 50*l*. to his wife, and appoints his son Thomas Francis an executor.

MANUFACTURE OF ANTISEPTIC DRESSINGS.

By SEWARD W. WILLIAMS, Ph.C., F.C.S., Manager of the Seabury Pharmacal Laboratories, Orange, N.J.

THE ideal surgical dressing is one which, while not interfering with the natural healing processes, possesses germicidal power to disinfect discharges and fairly lasting antiseptic power to inhibit germ-development and prevent infection from without, thus maintaining aseptic conditions regardless of environment. It is regarded by some that the best conditions for healing are ensured if we apply dressings which are aseptic or sterilised. This is true of many operations, but, unfortunately, it happens always that it is exceedingly difficult to sterilise dressings and keep them aseptic. Hence antiseptic dressings will always be resorted to, and, no matter how theory may change, antiseptic dressings will be wanted.

Salicylated Gauze.—To illustrate the principles involved in preparing a representative surgical dressing let us start with ordinary unbleached gauze and end with a salicylated dressing containing 5 per cent. salicylic acid based upon the weight of finished product. First we boil the unbleached gauze in a 2-per-cent. solution of sodium hydrate for several hours to saponify the natural oil in the fibre, remove wood-gum and other impurities. The operation is repeated in a weaker solution, the gauze washed well, passed through a bath of $\frac{1}{3}$ per cent. hydrochloric or sulphuric acid, washed again, and immersed in a solution of chlorinated lime (about 1° Twaddle) and bleached perfectly white. Again wash and pass through the acid bath; wash once more, extract as much water as possible with wringer or centrifugal extractor, and dry.

The strength of the medicating-solution depends upon the degree of pressure which it is practicable to give the gauze after treatment, and the weight of material which will remain in the gauze after drying. With good calenders we can press so that 100 parts of gauze will weigh 210 parts immediately after.

Prepare a solution by the following formula:—

Salicylic acid	5.6 parts
Glycerine	15.0 "
Rectified spirit	50.0 "
Distilled water to make 100 parts by weight.	

Pass the gauze (conveniently from a large roll made to turn on a spindle), full width and in single layer, under a roller in the bottom of a tank containing the solution, and up over a rubber-covered drain-board between a pair of 40-inch rubber calenders, having previously adjusted them so that 100 parts of gauze carries through 110 parts of liquid. Throw the driving-belt on to the tight pulley of the machine and, as the gauze passes from the calenders, lead it back and forwards over rollers in a drying-chamber, through which purified warm air is forced by a blower or drawn by an exhaust-fan.

As it passes from the desiccating-chamber the gauze may be folded longitudinally by suitable apparatus, measured as it passes over a long glass-top table, and rolled up or folded by machines previously made aseptic. The finished gauze is to be packed in containers freshly lined with melted paraffin, sterilised by heat. Gauze prepared by this method is permanently moist with glycerine. If it is desired to have a wet gauze, commonly called "moist," use more spirit, and "dry" so as to leave most of the water. One way to make moist salicylated gauze is to throw the ready-bleached gauze of the market from the bale or case into a vat containing a boiling-water solution of salicylic acid, and extract in a centrifugal extractor, returning the excess of solution to the vat. This method is objectionable for many reasons,

especially because the use of a boiling solution results in the first gauze drawn through the solution getting an unduly large proportion of the medication, and the last pieces being of low percentage.

The pharmacist working in the small way may start with plain absorbent gauze and wring out with rubber gloves or small wringer the excess of solution used, or he may make a certain weight of gauze take up all the solution, the quantity of material and liquid being properly graduated. The product cannot be uniform in either way, as the folds cause unequal expression, and the result is variation in percentage strength. In the case of salicylic acid, contact with iron should be avoided, as otherwise purple stains will result.

Carbolised Gauze.—The mixture originally employed by Dr. Lister in preparing carbolised gauze was carbolic acid 1 part, resin 5 parts, and paraffin 7 parts. The formula was afterwards changed to crystallised carbolic acid 1 part, common resin 4 parts, and paraffin 4 parts. The resin and paraffin should be melted, and, when the temperature is reduced to about 60° C., the carbolic acid is incorporated. The gauze is saturated and pressed between warm plates. The following modification of the formula works well in the large way:—Paraffin 40 parts, resin 26 parts, and petrolatum 14 parts, are melted and strained through cloth. When the temperature is reduced sufficiently, 10 parts of melted carbolic acid are incorporated (some allowance being made for volatilisation of the phenol). Through this melted mixture the gauze is passed full width and in single layer, into 40-inch iron calenders, kept warm by steam passing through them. The product is beautifully uniform and much less stiff than when no petrolatum is used. This gauze has the advantage of retaining the acid very well at ordinary temperatures, while at the temperature of the body it is slowly given up, causing an antiseptic vapour to envelop the wound.

The objection to dressings prepared with resin, wax, or oil is that they are non-absorbent. The demand is now mainly for absorbent carbolised gauze, in which the medication is combined with glycerine and distilled water or alcohol. Carbolic acid is much less active in oil, wax, or resin combination than when combined with alcohol, glycerine, and water.

Iodoform Gauze.—The formula given by the National Formulary is probably the best adapted to the use of the pharmacist. It also works very well in the large way. Benzoin tends to somewhat impair absorbency. Ready-bleached gauze is apt to contain traces of starch, and if in the process a little iodine is liberated the gauze may assume a greenish tint owing to the combined blue colour of iodide of starch and the yellow of the iodoform. Should this occur, the gauze may be hung in a chamber over the floor of which a little water of ammonia has been sprinkled. The ammonia-vapour breaks up the iodide of starch:—

	Parts
Iodoform	10
Stronger ether (s.g. 725)	40
Alcohol (s.g. 820)	40
Tincture of benzoin (1 in 5)	5
Glycerine	5
Gauze muslin	A sufficient quantity

Dissolve the iodoform in the stronger ether, then add the alcohol, tincture of benzoin, and glycerine. Immerse in a weighed quantity of this solution, contained in a suitable vessel, the exact amount of gauze muslin required to absorb the whole of it to produce a product of a prescribed percentage of iodoform; work it about with a pestle so as to impregnate it uniformly, then take it out and hang it up to dry in a horizontal position and in a dark place. Lastly, wrap it in paraffin paper and preserve it in air-tight receptacles.

Bisulphide of carbon being a powerful solvent of iodoform, naturally suggests itself for the preparation of this dressing, but its disagreeable odour and extremely combustible nature make its use undesirable. In the writer's

experience, alcohol and ether as solvents act very well in preparing iodoform dressings of all kinds.

Corrosive-sublimate Gauze.—The following is the formula used by the medical department of the German Army:—

	Parts
Mercuric chloride	50
Rectified spirit	5,000
Distilled water	7,500
Glycerine	2,500
Fuchsin	5

The gauze is saturated in this solution, passed through a wringer, and dried. The object of tinting is to make the sublimated readily distinguishable from plain and other gauzes. The strength of gauze prepared by this formula, if the greatest expression is used, will be about 1 to 300, with ordinary wringing out nearer 1 to 250 or 200.

It is well to keep the following precautions in mind when making this gauze:—

Water used in preparing sublimate solutions should always be distilled.

Organic principles, wood-gum, &c., present in common gauze have a marked reducing action on sublimate, particularly in the presence of moisture.

Mercuric chloride forms an insoluble albuminate of mercury in contact with the albuminous matter of wounds. To prevent this Dr. Laplace, as far back as 1887, advised the use of tartaric acid in combination with corrosive sublimate. Drs. Lübbert and Schneider, however, found that the acid caused irritation, and that an alkaline chloride accomplished the desired result better. The formula recommended by them is:—

	Parts
Mercuric bichloride	3
Sodium chloride	100
Distilled water	600
Glycerine	100
Rectified spirit	200

Dissolve the sodium chloride in water; filter, add the sublimate, and when dissolved, the glycerine and spirit.

Dressings will commonly hold $1\frac{1}{2}$ times their own weight of this solution.

The sal-alambroth gauze accords with the above statement regarding the use of alkaline chlorides. Sal alambroth, or ammonio-mercuric chloride, is prepared (*vide* "Extra Pharmacopœia") by mixing solutions of mercuric chloride and ammonium chloride in molecular proportions—271 of the former to 107 of the latter. A gauze is prepared by treating in the usual way with a 1 per-cent. solution of sal alambroth containing some glycerine, and tinting with aniline blue.

When it is considered that the 1-per-cent. gauze recommended by this authority represents practically two-thirds of 1 per cent. corrosive sublimate in its most active form, we are led to wonder why such low strengths as 1 to 2,000 or 1 to 4,000 are sometimes called for. From the experiments of Drs. Link and Voswinkel it would appear that a strength of less than 1 to 400 is liable to be reduced largely or entirely in the presence of moisture. The writer is therefore inclined to discourage moist sublimated gauzes of lower strength than this. While 1 to 4,000 or 1 to 2,000 gives satisfaction as irrigating solutions, which must of necessity be very weak, this is no reason why a 1 to 2,000 gauze should be of value. Granting that the sublimate is not all reduced by the cotton fibre, it may be diluted so many times in contact with the fluids of the wound as to be practically of little or no use. In the writer's judgment from 1 to 400 to 1 to 200 is a proper range of strength for sublimated gauzes.

Double Cyanide of Mercury and Zinc Gauze.—Sir Joseph Lister's latest directions for the preparation of this gauze have been mentioned in this journal (see THE CHEMIST AND

DRUGGIST, March 4, page 324), and need not be further referred to here.

Hydronaphthol Gauze.—The idea of medicating dressings with an antiseptic having such a solubility as to yield itself fast enough for thorough antiseptis, but so slowly that it will require a long time for it to be washed entirely from the dressing, is evidently a most excellent one. Hydronaphthol possesses this great advantage, being soluble at ordinary temperatures to the extent of about 1 part to 1,000, and is reliably antiseptic in this proportion; 5-per-cent. hydronaphthol gauze may be prepared in the same manner as salicylated gauzes, merely substituting hydronaphthol for the salicylic acid in the formula before given. Dressings impregnated with hydronaphthol are naturally very lasting, as compared with carbolic and similar dressings, and its compatibility with albuminous fluids gives it preference over corrosive sublimate.

Bismuth Subiodide and Hydronaphthol Gauze.—The writer has submitted to local surgeons a gauze containing 10 per cent. bismuth subiodide and 1 per cent. hydronaphthol, and has received very favourable reports from its use. The subiodide may be held in suspension by agitation in process of preparing the gauze.

Benzoated Gauze.—Prepared by substituting benzoic acid 5 per cent. for salicylic acid in the formula given for salicylated gauze.

Borated Gauze.—Ten-per-cent. gauze may be prepared after the manner of salicylated gauze, slightly warming the solution.

Thymol and Eucalyptol Gauzes.—Five-per-cent. thymol or eucalyptol gauze may be prepared in the same way as the salicylated.

Containers for Surgical Dressings.—For gauzes the writer prefers a light container prepared from pure wood pulp in the manufacture of which hydronaphthol is used. This container, immediately before use, should be lined with melted paraffin sterilised by heat, and, after packing, hermetically sealed. There is with this container no possibility of corrosion as with tin, and no liability to breakage as with glass. Lacquered after sealing, the package is perfectly air-tight. Instead of the sterilised paraffin lining, the inner surface of the container may be coated with celluloid varnish, rendered antiseptic with hydronaphthol, time being allowed for thorough drying.

CANTHARIDIN POMADE.—In the formula published on page 686 last week, for "Acet. canthar. *z*iv.," read "Acet. canthar. *fort*, *z*iv."

QUININE acts strangely sometimes. A contributor of the *Indian Medical Record* mentions the case of an old lady to whom he prescribed $1\frac{1}{2}$ grain of the sulphate thrice daily, but after taking the first dose she felt a troublesome itching on the lower lip, on the lobe of the left ear, and on the dorsum of the left foot, resulting in about an hour in inflamed patches with troublesome irritation. This irritation passed off in about forty-eight hours, leaving dark spots, which exist to this day. Easton's syrup had the same effect.

ANTIPYRINOMANIA.—Under this big mouthful is described in the *B. M. J. Epitome* a case of addiction to antipyrin on the part of a girl of 23. She took 8 grammes daily, and, try all she could, could not give it up. She would neither brook the least reduction in amount nor delay in administration. She entered an asylum, with the desire of being cured, and here an attempt made suddenly to reduce the amount given resulted in such prostration that it was found necessary to treat the case like one of morphinomania, there being a great similarity between the two conditions. Under large doses of potassium bromide and, later, caffeine she was completely cured, both of the headaches and also of her craving for antipyrin.

Scientific Notes :

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

JURUBÉBA—"SOLANUM PANICULATUM."

THIS South American drug, to which reference was made in this journal a few weeks ago, has been examined by Dr. Domingos Freire, and obtained an alkaloid and two resinoid principles. The alkaloid—jurubébine—in form of a hydrochlorate, when injected in very minute quantities into a small bird produced marked tetaniform convulsions, ending in death. Of the resinoid substances jurubébine has an extremely purgative action, such as that of podophyllin, which it closely resembles. The second, jurubébin, is non-active. Dr. Domingos Freire considers that the poisonous alkaloid is found especially in the leaves of the plant.

CHERRY-TREE GUM.

F. GARROS in examining and comparing this gum with gum arabic (from which it differs in some respects) noticed that a solution of the cherry gum on standing for about six weeks appeared to undergo fermentation. On microscopic examination he discovered that there was present a micro-organism in abundance which had all the characteristics of a ferment, and which appears to be present in the natural gum. The action of the ferment is favoured in the presence of ammonium tartrate and warming to 40° or 45° C., while the addition of 5 per cent. of common salt or boiling prevents it. Cerasin, the insoluble part of cherry gum, is also acted upon by the ferment, doubtless the first change being to galactose, its hydrolytic product. The author is of opinion that the soluble part of cherry gum is identical with arabin. His results have been published in *Journ. de Phar. et Chem.* (1892, p. 536).

CONSTITUENTS OF KOLA.

THE following analysis of kola-nuts by Astier is of interest at the present time, when the popularity of the drug is on the increase rather than the wane:—

	Per cent.	
Caffeine	2.348	Matter soluble in chloroform 2.983 per cent.
Theobromine	0.023	
Tannin	0.027	
Fatty substances	0.585	Matter soluble in alcohol 5.826 per cent.
Tannin	1.591	
Kola-red	1.290	
Glucose	2.874	
Non-volatile salts	0.070	
Starch	33.755	
Gum	3.040	
Colouring-matter	2.561	
Proteids	6.761	
Cellulose	29.831	
Water	11.919	
Ash	3.325	
Total	100.000	

FACTORS REGARDING MYDRIATIC ALKALOIDS.

FOR the sake of reference it may be useful to place the following figures of Hesse's on record:—

Pure atropine, m.p. 115.5° C.	Sp. rot. p. $[\alpha]_D$ = 0.4.
" " platinochloride, m.p. 197°-200° C.	
" " anrochloride, m.p. 138° C.	
Pure hyoscyamine, m.p. 108.5° C.	Sp. rot. p. $[\alpha]_D$ = 20.3°.
" " platinochloride, m.p. 206° C.	
" " anrochloride, m.p. 159° C.	
Hyoscyne or scopolamine, $[\alpha]$ = 13.7°.	

A crystallin alkaloid comes into commerce under the name of atropinum naturale; it is prepared from belladonna root, and most of the samples of commercial atropine sulphate are derived from this alkaloid. The base forms white needles, melts at 109°, and has a specific rotatory power of $[\alpha]_D$ = 16.2. An optical analysis of the sulphate showed it to be a mixture of hyoscyamine sulphate 68.2 per cent. and atropine sulphate 31.8 per cent.

SOLUBILITY OF CREAM OF TARTAR IN SPIRIT.

THE following figures, according to Wenger (*Amer. Chem. Jour.*), represent the solubility of cream of tartar in alcohol of various strengths:—One thousand parts of 90-per-cent. alcohol dissolve 0.15 part of bitartrate; of 80-per-cent., 0.19; of 70-per-cent., 0.30; of 60-per-cent., 0.41; of 50-per-cent., 0.79; of 40-per-cent., 1.32; of 30-per-cent., 1.96; of 20-per-cent., 3.01; of 10-per-cent., 4.51. A litre of water dissolves 5.75 grammes of cream of tartar.

OIL OF NIAOULI.

THIS oil is a distillate from *Melaleuca viridiflora*, and, according to Dr. A. Kraus ("L'Union Pharmaceutique," 1893, page 1), at 14.5° C. it is of sp. gr. 0.929 and sp. rot. pow. +9° 44' in 200-mm. tube. It begins to distil at 169° C., and all but 3 to 7 per cent. distils between that and 295° C. Dr. Kraus carefully fractionated the oil, and found that the fraction distilling between 170° and 180° C. (which constitutes from 21 to 46 per cent.) gave all the characteristics of cimol, $C_{10}H_{18}O$. Above 270° C. a sulphone was obtained.

SALICYLACETIC ACID.

ON heating 169 parts of dry sodium salicylate with 100 parts of 40-per-cent. soda solution, then adding to the cold mixture 130 to 140 parts of sodium monochloracetate, heating to 120° C. and neutralising the mixture afterwards with dilute hydrochloric acid, salicylacetic acid is obtained. It may be purified by washing with cold water and drying. Traces of salicylic acid are removed with ether, in which salicylacetic acid is insoluble. The melting-point of the acid is 188° C. It is generally unaffected by the common solvents. It is an antiseptic, and forms with antipyrin a salt which is also possessed of antiseptic properties.

PARACOTO-BARK OIL.

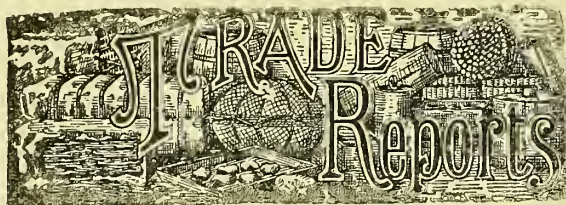
PARACOTO-BARK yields by distillation an essential oil which has been examined by Wallach and Reindorff. They find in it a sesquiterpene and the methylester of eugenol $C_6H_5.C_6H_5.(OCH_3)_2$. The hydrocotoin of Ciamician and Silber, having the formula $C_6H_5.(OCH_3)_2.OH.CO.C_6H_5$, closely resembles methyleugenol, they think. They have also studied *alpha*, *beta*, and *gamma* paracotol, isolated by Jobst and Hesse, and regard them as mixtures of sesquiterpene and methyleugenol. Alpha-paracotol they regard as a natural isomeric hydrate of cadmenic ($C_{15}H_{24}$) which is found in pachouli, sage, and galbanum oils. If that is so, the formula should be $C_{15}H_{26}O$, not $C_{15}H_{24}O$, as stated by Jobst and Hesse.

ASSAY OF HYDROGEN PEROXIDE.

THE following is an easy method of estimating the strength of hydrogen-peroxide solution, which was proposed by Mr. Frank X. Moerk, Ph.G., at a pharmaceutical meeting of the Philadelphia College of Pharmacy recently:—Make a solution by dissolving 38.5 grains potassium permanganate in 32 oz. of distilled water. One fluid drachm of this solution liberates $\frac{1}{2}$ fluid drachm of oxygen at 20° C. In the assay the following measures should be used: 1 fluid drachm each of hydrogen peroxide and dilute sulphuric acid, 16 oz. tap-water, and then add the permanganate solution from a bottle or measure containing 4 fluid oz.; the number of fluid drachms of permanganate solution used, divided by 2, gives the volume of oxygen liberated by the H_2O_2 .

MICRO-CHEMICAL TEST FOR TURMERIC.

SOME years ago Hans M. Wilder accidentally found a test for the presence of turmeric in powdered rhubarb and yellow mustard, which he has since had occasion to use, and found satisfactory; so he writes about it to the *Druggists' Circular*. The test is based upon the fact that volatile oils dissolve the colouring-matter of turmeric, while they do not extract any colouring-matter from either rhubarb or mustard. The method of application is very simple. Mix a little of the suspected powder with any volatile oil, and examine under the microscope. The smallest speck of turmeric present will be found surrounded by a yellow zone, while the particles of rhubarb or mustard will merely have their colour brightened. In the absence of turmeric, the microscopical field will remain colourless, while turmeric will instantly colour the whole or part of the field yellow.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., May 25.

ACID (CITRIC).—The market is decidedly firmer. Very little supplies are left in second hand, and 1s. 5½d. per lb. is now the lowest market price, although some business was done this week at rates a trifle below that figure. The makers ask 1s. 5½d. and 1s. 5¾d. per lb. *Lemon-juice* is reported dearer from Sicily, some holders quote 18l., others 20l. f.o.b.

ACID (TARTARIC).—Steady at 11½d. to 12d. per lb. according to brand.

ALCOHOL.—Unchanged. Best brands of German potato spirit are quoted at 9s. 4d. to 9s. 5d. per proof gallon c.i.f. terms, naked, in bond, for quantities.

ALOES.—*Cape* aloes in very scanty supply and firmly held out of 6 cases offered four sold at 22s. 6d. per cwt. for dull stony. Of *East Indian* aloes there was a fair supply both of skins and kegs, but no sales were effected. *Curaçao* aloes are also in scanty supply. Eleven boxes offered to-day sold without reserve at 29s. per cwt. for fair dark livery, and 17s. per cwt. for dull.

AMBERGRIS.—Without any demand whatever. About 80 oz. were bought in at to-day's auctions. For fine grey, 140s. per oz. is asked; fair quality, 100s.; ordinary dark to medium, 40s. to 85s. per oz.

ANISE.—*Russian* anise is said to be very scarce, although at to-day's auctions more than one parcel of this drug was offered. The prices asked run from 26s. 6d. per cwt. for fair to 27s. 6d. per cwt. for good quality.

ARECA.—Sales were made to-day at lower rates, 45 bags selling at from 20s. 6d. to 21s. per cwt.

BENZON.—*Sumatra* gum is utterly neglected, and, in spite of the fact that only 56 cases were offered at to-day's auctions, not a single package found a buyer. Fair seconds, not very almondy and somewhat false-packed, were bought in at 6l. to 6l. 5s. per cwt. Of *Siam* gum 17 cases were offered, of which 7 sold at 7l. 15s. per cwt. for good clean bright siftings in block, showing a slight decline in value. Thirty cases *Palembang* gum were all bought in. A bid of 36s. per cwt. for fair almondy gum was rejected.

BUCHU.—About 50 bales were offered, of which 22 sold at a good price though without any positive change in value. Yellowish to good bright green round leaves sold at 5d. to 5½d. per lb., and fair long greenish at 7½d. per lb. One holder declined to accept anything below 5½d. per lb. for round leaves.

CALUMBA.—Of 253 packages shown to-day, 130 sold, mostly without reserve, at a decline in price; small to bold partly wormy brown and yellow mixed realising 21s. per cwt., and duller ditto 17s. 6d. to 18s. per cwt.

CAMPOR (CRUDE).—The last spot sales were at 120s. for *China*, but it is doubtful whether that figure would now be obtainable. The market is still without any sign of improvement, and, if reports from *China* may be trusted, there is every prospect of a further decline, as it is said that the supplies now coming in from the Island of *Formosa* are

exceedingly large. The nearest c.i.f. quotation for *China* is still 97s. 6d. for present shipment. At auction to-day 31 cases of very dark colour sold at 115s. per cwt.

CANNABIS INDICA.—Slow of sale at present. Sixty-seven robbins shown to-day did not find buyers, dusty greyish green tops being bought in at 5d., ordinary brown to fair greenish siftings at 2¼d. to 3d. per lb.

CANTHARIDES.—Only 6 cases *China* were offered at the sales to-day; they are held for 1s. 3d. per lb., the quality is small to medium size partly wormy.

CARAWAY-SEED.—Privately much higher prices are asked, and *Dutch* seed, which was recently offering at 21s. 6d., is now held for 23s. f.o.b. At auction to-day 100 bags were all bought in at 52s. 6d. per cwt.

CARDAMOMS.—The demand still continues, and high prices were obtained for good qualities at to-day's auctions. Of 188 bags 73 sold as follows: *Ceylon Mysore*—Good medium to bold pale, 3s. 7d.; small to bold ditto, from 3s. 3d. to 3s. 6d.; medium size, plump, 2s. 10d. to 3s.; small pale and yellow, 2s. 5d. to 2s. 6d.; long medium yellow, fair quality, 2s. 1d.; fair small brown mixed, 1s. 7d. to 1s. 11d.; very small pale, 1s. 8d.; partly split dull and specky, 1s. 5d. to 1s. 6d. *Atcepy* character, medium size, fair brown, 1s. 3d. *Tellicherry*—Small to medium brown and black unclipped, 1s. 1d. to 1s. 3d.; ordinary grey to dark *Seed*, 1s. 4d. to 1s. 5d. per lb. The exports from *Ceylon* between January 1 and April 24 were:—1893, 151,664 lbs.; 1892, 161,886 lbs.; 1891, 107,797 lbs.; 1890, 144,903 lbs.

CHAMOMILES.—We hear from *Belgium* that this article is likely to be very scarce this season and high prices are expected; the crop will probably be from four to five weeks late, and deliveries, it is said, are not to be looked for until the second half of August.

CHLORATE OF POTASH.—Slightly easier, at 8¾d. per lb. on the spot, f.o.b., *Liverpool*.

CINCHONA.—The following figures relate to the exports of cinchona from *Ceylon* during the periods between January 1 and April 24:—1893, 1,627,992 lbs.; 1892, 1,927,586 lbs.; 1891, 1,804,935 lbs.; 1890, 2,806,992 lbs. Up to the present, 2,104 packages bark have been declared for next Tuesday's auctions. They include 1,064 bales *East Indian* and *Ceylon*, 160 *Java*, 184 *South American Calisaya*, and 48 *African*. There are also 526 bales of *Pitayo* and 22 bales of soft *Colombian* bark, which will be sold without reserve. Part of this belongs to a parcel of 548 packages, imported in 1884, which is advertised for sale by the proprietors of one of the *London wharves* to defray the landing charges and rent accrued upon it. The only parcel of *South American cinchona* of any interest offered to-day, consisted of 9 packages *Guayaquil*, which were bought in at 1s. 6d. per lb. for good bright quill and at 8d. to 9d. for ordinary chips.

CIVET.—Two horns were shown to-day, but bought in. A suggestion of 13s. per oz. was thrown out, but there was no response to this.

COCA-LEAVES.—Four bales *Truxillo* fair to good green broken leaf were bought in, at 1s. 6d. per lb. to-day.

CREAM OF TARTAR is rather firmer. On the spot, 77s. per cwt. is asked for the best white *French* crystals, and from *Bordeaux* the quotation to-day is 72s. 6d. f.o.b.

CUBEB.—Although one of the holders was anxious to sell to-day, he did not succeed in effecting his purpose. Thirty-four bags were all bought in, at 75s. to 85s. per cwt. for good blue and brown mixed partly-shrivelled berries, not stalky.

CUMIN-SEED.—For one small lot from *Bombay* of fair quality, a bid of 17s. per cwt. was refused.

ERGOT OF RYE.—From *Hamburg* rather higher prices are quoted, 1s. 3½d. c.i.f., being the lowest figure mentioned from there to-day. It is said that the rye-crop promises badly throughout *Russia*, and there are expectations that the dry weather has adversely affected the formation of ergot in the grain. At auction to-day, 24 bags were all bought in at 1s. 6d. per lb., a bid of 1s. 1d. being refused for brown and wormy mixed.

FENNEL-SEED.—Ninety bags from *Bombay* were all bought in, rather stalky and dusty at 16s., good to bright at 19s. per cwt.; for the latter a bid of 18s. was refused.

GALLS (CHINA).—Still moving upwards. For good *China* galls on the spot 57s. per cwt. has been paid, while for arrival, May-June shipment, 54s., c.i.f. continental port, is asked.

GUINEA GRAINS.—For 1 parcel of 36 bags offered to-day only 22s. was bid, while the owner wants 24s. 6d.; another lot of 10 bags fair quality sold without reserve at 22s. 6d., a decline of 2s. 6d.

GUM ACACIA.—Quiet and without much demand, a parcel of fair partly dusty and hard sorts from Suakin is held for 60s. per cwt., one bag ordinary blocky and dark Australian sold at 10s., and 5 cases Turkey drop small to medium grey and yellow in colour sold without reserve at 6l. 17s. 6d. to 7l. The stock of Persian gum, we are assured, is nearly all in one hand, and it is said that the last price paid was 30s. and that this was some weeks ago, and since then no business has been done.

GUM ASAFETIDA.—The 29 cases recently imported were offered to-day with good competition, 18 of them sold at an advance of from 5s. to 10s. per cwt. in price; fair to good almondy pinky at 87s. 6d. to 92s. 6d. Grey and dark mixed partly block fair dry at 65s. to 72s. 6d. per cwt.

HONEY.—*Jamaica* honey still sells at pretty good prices. Of 51 packages offered to-day 17 realised from 25s. 6d. to 27s. 6d. for dark and rather dirty to fair brown liquid; 5 cases, described as *Californian*, dull grey, partly candied of fair flavour, by land carriage, sold without reserve at 30s., a very high price. Of *Australian* honey 20 cases from Brisbane, each in 2 56-lb. tins, were offered, the quality was clean amber treacley, and the price obtained ranged from 26s. to 27s. 6d. per cwt.

INSECT-FLOWERS.—At auction 4 bales partly closed flowers were bought in at 82s. 6d. per cwt.

IPECACUANHA.—Of *Brazilian* root, about 115 packages were shown, the quality being mostly exceedingly woody and stalky. The demand was very slack, both for export and the home trade, and with some difficulty holders contrived to sell 30 bales, at a slight advance for medium to good quality, while ordinary wiry root was rather easier. The following prices were paid:—Sound medium to good annulated, 5s. 11d. to 6s. 7d.; ordinary thin wiry, from 4s. 6d. to 5s. 4d.; first and second class damaged ordinary thin to fair medium, 4s. 6d. to 5s. 7d.; ordinary, badly damaged and mouldy, from 4s. 2d. to 4s. 8d. per lb. Of *Carthagena* root only 10 bales were actually offered, although a much larger quantity had been declared for sale. No bids whatever were made, and the whole consignment was bought in at nominal rates. The imports this week include 32 packages of *Cartagena* root from Panama, by the *Don*. There has also been an arrival of 71 packages *Brazilian* root from Monte Video by the *Elbe*.

JALAP.—The market is irregular. At the auctions 24 out of 62 bales offered sold at somewhat lower prices; good *Vera Cruz*, partly heavy, good brown colour, 1s.; mixed *Vera Cruz* and *Tampico*, partly wormy, mixed with a good deal of small, 11d. per lb.; very pale broken mixed root with stems and partly sliced, also containing some good heavy, at 9½d. for sound, and from 9½d. down to 6½d. for more or less damaged. Since the auctions it is said that about 20 more bales have been disposed of at improved prices.

KOLA.—In moderate supply and steadily held; 6½d. is asked for fair brown chips.

KOUSSO.—Four bales of loose flowers, newly imported from Alexandria, were bought in to-day at 1s. per lb. It is said that the same quality recently sold at 1s. 3d.

MUSK.—Of *Tonquin* pods a moderate supply was shown to-day. Of first pile there were nine tins in auction, of which one sold at 45s. per ounce for small to bold, partly damp, usual skin unsightly, which is lower; on the other hand, out of five tins third pile four sold, at an advance of 2s. to 3s. per lb.—namely, 37s. to 38s. for usual skin badly-trimmed small to bold fair dried, and 45s. for well-trimmed brown and blue skin and underskin fairly dry; these prices are the best which have been bid at auction for third pile pods for many weeks.

NUX VOMICA remains quiet. A bid of 9s. 9d. per cwt. was again rejected for a parcel of dull dark bold seeds from

Colombo, for which the holder will take 10s., 64 bags small and dark sold at 9s. per cwt.

OILS (ESSENTIAL).—For *Lemongrass oil* 2½d. per oz. has been paid, showing a fresh improvement in value. The price of *Caraway oil* has been advanced 6d. per cwt., the present figures being 5s. 3d. to 5s. 6d. per lb., according to quality. In *Menthol* and Japanese *Peppermint oil* there is no change, but American oil is slightly easier, HGH might be bought here at 12s. 4½d., or perhaps even at 12s. 3d. For 23 cases *Cinnamon-leaf oil* offered to-day a bid of 1¼d. per oz. was refused, as was also an offer of 6d. per oz. for 4 cases of *Oil of cinnamon*. Unworked *Oil of cassia* sold at 3s. 6d. per lb.; from China none is offering at present. Sales have been made of *Star-anise oil* this week at 5s. 3½d. per lb., c.i.f. terms, for June shipment; for 10 cases *Eucalyptus oil* shown to-day, 1s. 4d. per lb. is asked, and 5 cases *Lemon-grass oil* were bought in at 2¼d. per oz.

OPIUM.—Our Constantinople correspondent writes on May 15:—Little or no business has transpired on this market since the commencement of the present month, the total sales amounting to 17 cases old Malatia seconds at 9s. 6d. to 10s., and 4 cases druggists' at 11s. f.o.b. The market closes quiet with sellers, but no buyers, at about 11s. f.o.b. for ordinary grades. The weather has been favourable to the poppy plants since the beginning of May. A Smyrna report, dated May 19, states:—"A dead calm has reigned here during the last fortnight, the only business which has taken place being a sale of 9 cases Zilleh opium of inferior quality at 10s. 11d. per lb. f.o.b. This kind of opium is quite unlike any of the varieties usually imported. A few cases of it come in occasionally, and are always bought by the same buyer. The situation is uncertain. Small speculators begin to show much anxiety to realise, whilst the big holders affect indifference and did not offer. The crop is at least forty days late. Our stock here is 1,850 cases, of which 400 belong to local speculators."

ORRIS-ROOT.—Mogadore-root continues to sell at high prices, 7 bales fair grey to dark brown realising from 40s. to 50s.; for ordinary rather dark mixed sorts from Leghorn, 80s. is asked; and good pale and yellow mixed ditto were again bought in at 100s.

POPPY HEADS.—It is stated that the English crop is likely to yield practically nothing this year, and in Belgium also there will be very little gathered, and prices will be high. The present quotations from Belgium are, for large heads 12s. 6d., small ditto 9s. per thousand.

PUREE.—An 83-lb. case sold to-day without reserve at 7s. 6d. per lb.

QUASSIA has been much inquired for lately, principally on account of the drought and the consequent need for blight-destroyers. Logs have sold at 6l. per ton privately, an advance of about 20 per cent. Eighty bags good bright slightly damp, chips London, cut were bought in to-day at 15l., a bid of 10l. being refused. It was stated that logs have been sold to-day at 8l. per cwt., and since then we are even told that 10l. has been paid.

QUININE.—Just before the holidays a London speculator is reported to have bought a lot of 50,000 oz. second-hand German bulk quinine at 9½d. per oz. for July-September delivery. This shows an advance of ¼d. per lb. upon the last quotation. No other business has been reported.

SAFFRON.—Unaltered at 25s. 6d. for best, and 23s. 6d. for second quality *Valencia*.

SARSAPARILLA.—Fairly steady, but the only kind in demand is native *Jamaica*, of which 7 bales rather pale and ordinary reddish sold at 8d. to 9d. per lb.; 45 bales damaged *Lima Jamaica*, just landed from Panama, were bought in at 1s. 2d. per lb. *Honduras* is held for 1s. 5d., and for *Guayaquil* there was no answer at 10d. per lb. for damaged root of recent import.

SENNA.—The *Senator* has brought another consignment of 67 bales *Tinnevely* senna from Colombo this week. In *Tinnevely* senna no business of any importance was done to-day. *Alexandrian* leaves are neglected; for fair green 7½d. per lb. is the price; medium ditto is held for 6½d., and for pods there was no bid at 5½d. per lb.

SHELLAC.—Before the holidays there was a very strong tone in the market, and the business reported included unworked TN *second orange* on the spot at 108s. 6d. to 110s. AC *Garnet*, spot, at 98s. and TN for delivering at 115s. for June, 116s. for July, and 117s. for August. Immediately upon the resumption of business after the holidays, prices further advanced, and sales were made at 118s. for August TN, and at 99s. per cwt., cash terms, for AC *Garnet*. To-day the market is quiet.

SPICES.—Ten bags African *Ginger* appeared to be sold at to-day's auctions at the very high price of 50s. per cwt., and 53 bags Sierra Leone *Chillies*, fair bright partly yellow mixed, brought 37s. 6d. per cwt.

SQUILLS.—Fine quality is said to be very scarce. Some sold to-day at 3½d. per lb., while yellow brought 2d., and ordinary to dull from 1d. down to ½d. per lb.

STAR-ANISE.—Neglected. Several parcels were bought in to-day at 77s. 6d. to 80s. per cwt. They were mostly small and broken.

TEA.—The market is usually somewhat slow in recovering from holidays, and there is very little doing this week, although dealers did a fair trade in the country up to the end of last week. A small China sale, on Wednesday, went without change from last week's reduced rates, and new-season's Newmakes, 1893-94, sold privately from 6¾d. to 9d., showing very fair value, except for commoner sorts. A few breaks of Assam and a fair-sized Ceylon sale were advertised for Thursday, and went at last week's prices. There is a good deal of Ceylon to come forward, and a pretty general feeling of caution abroad, so that we are not likely to see any firmer rates, except, possibly, for fine quality teas over 10d.

TONQUIN BEANS.—Two casks fine frosted *Angostura* beans were bought in at 8s. 6d. Of 13 casks *Para 5* sold at 1s. 6d. for rather ordinary foxy mixed; for fair black 1s. 8d. is the price. The market is dragging.

TURMERIC.—Neglected and somewhat dull of sale, even at easier rates. Of *Madras* root 11 bags finger slightly mixed with bulb and not very bright sold at 23s. per cwt. to-day.

VANILLA.—Six packages vanilla were imported here from the West Coast of America by the *Don* this week. At to-day's auctions very little was offered and prices remain unchanged. Fine slightly crystallised 7 to 7½ inches sold at 13s. 6d. to 15s.; 8 inches, 17s.; good chocolate 4½ to 8 inches, 10s. to 13s. 6d.; 5½ inches, 9s. 6d. per lb.

WAX (BEES'). remains exceedingly firm; 16 packages *Jamaica* were all sold at 8l. to 8l. 5s. for fair reddish to fine bright orange, and 7l. 7s. 6d. to 7l. 12s. 6d. for ordinary dark. Of 409 packages *Madagascar* 125 sold at 5l. 15s. to 6l. 10s. for medium to fine bright.

WAX (JAPAN).—A bid of 33s. was refused to-day for 25 cases of good quality, for which 35s. is the limit.

THE LIVERPOOL MARKET.

COLOCYNTH.—Six cases fine *Turkish* apple have realised 1s. 2d. per lb.

GINGER.—Prices for *African* root have ranged during the week from 43s. 6d. to 45s. per cwt., and the market again closes at 47s. 6d., at which buyers hesitate to operate, but holders are firm.

GUM ACACIA.—There is much more inquiry, and 85 serons hard amber sold at 52s. 6d. per cwt. Smaller transactions have passed in other grades up to 75s. for fine soft white.

OIL (CASTOR).—The value of good *Seconds Calcutta* has been maintained, and 2¾d. to 2⅞d. per lb. is still value. First-pressure *French* moves slowly at 2⅞d. to 2½d. per lb.

TURMERIC.—Fifty bags split Bombay sold at 8s. 9d.

WAX (BEES').—Eight cases fine *Bombay* have sold at 7l. per cwt.

THE NEW YORK MARKETS.

(From our Correspondent)

NEW YORK, May 16.

THERE is no disguising the fact that the season has so far been a most disappointing one, and there are no very evident signs of any early improvement. The cause of this dulness is the financial stringency which has been steadily becoming more and more marked until this week, when the natural result of the contraction was observed in the numerous failures on Wall Street. The steady downward movement all along the stock list, the steady outflow of gold to Europe, and the uncertain policy of the new Administration on the subject of the gold reserve and the issuance of new bonds, having in co-operation with stock-jobbing operations resulted in the failures referred to, capitalists have begun to call in all loans which were not really gilt-edged securities, so as to avoid direct losses, and also to be able to meet any sudden emergency. The American public are great stock-gamblers' buying on margins in a small way, and all sorts and conditions of men get "squeezed" for from \$5 to \$5,000,000 when a slump in the stock-market occurs, as the bulk of the crowd are bulls. This, while apparently foreign to the drug-market, has had a most direct and marked influence in curtailing speculative and even consumptive movement. There is an almost total absence of any speculative interest, since the causes above referred to are not set off by any specially urgent consumptive demand either here or from abroad. *Opium* has gradually declined, and there is reported to be an active canvass from the Philadelphia morphia-makers for orders at \$2.90, though on the spot \$3 is the asking-price in single-case lots, though at the close a firmer feeling is noted. *Quinine* is selling fairly well in a jobbing way, and even a few fair-sized lots have changed hands at 19½c. to 19½c. *Cascara sagrada* is dull and heavy, with 6c. the asking-price, though less money would be accepted on round lots. *Insect-flowers* are decidedly firmer under unfavourable reports from the source of supply and of an increased demand naturally incident to the season. *Balsam copaiba* is rather firmer, though no large transactions are reported. *Balsam Peru* is offering at \$1.60 to \$1.65, though strenuous efforts are being made to control the market and raise the prices. *Cocaine* has been reduced by both foreign and domestic manufacturers, the bulk price being \$5.40, ounces \$5.45, and eighths \$5.65. *Guarana* dull and lifeless, at \$1.05, with no takers. The reports from the *Peppermint* districts are, as usual, most unfavourable, though there seems to be some foundation for these alarmist statements; at least, it is claimed that, owing to the cold and wet weather, setting out of the roots has been delayed, that labour is scarce, and that there is every prospect of a smaller acreage being put into these plants than for some years past. While it is too soon to be able to tell anything definite, this kind of talk has had the effect of strengthening the views of holders, and there is a decidedly firmer feeling noted, two 25-case lots of HGH having been sold at \$2.70 and \$2.75. *Gum chicle* has advanced to 45c. *Ipecacuanha* has followed the downward course of the London market. *Senega* is quiet, but firm, at 54c. for Minnesota. *Mexican sarsaparilla* is in rather full supply, and easy at 8c. in round lots, or 8½c. to 8¾c. for jobbing quantities. *Jalap* has declined, but at the close importers are rather firmer, quoting 22c., which, however, is above the views of buyers. The whole crop is said to have been marketed now. *Golden-seal* root has been sold at 22c. per lb. in a small way. *Nitrate of soda* appears to be in excessive supply, and the market is dull and weak at \$2.00 to \$2.05. *Copperas* is easy, with sellers of car-load lots at 80c. to 90c. *Coca-leaves* are quiet, at 22c. to 25c. for Truxillo and 35c. to 38c. for Huanoco; no movement is noted, nor any marked urgency to sell. *Balsam-fir* Canada is still well held up in price, but the demand is almost as limited as the supply: \$3.50 is wanted in some quarters.

THE SMYRNA OPIUM MARKET.

(Telegram from our Correspondent.)

SMYRNA, May 24.

The demand for opium has temporarily come to a stop, and under these circumstances prices seem likely to tend lower. Fair quality manufacturing opium is offering at the parity of 11s. 6d. per lb. f.o.b.

THE DUTCH MARKET.

AMSTERDAM, May 18.

ALL the analyses for the cinchona sales to be held here on June 1 have been published. The manufacturing bark contains 21 tons sulphate of quinine, or 4.57 per cent. on the average. About 9 tons contain 1.2 per cent.; 59 tons, 2.3 per cent.; 137 tons, 3.4 per cent.; 123 tons, 4.5 per cent.; 39 tons, 5.6 per cent.; 58 tons, 6.7 per cent.; 17 tons, 7.8 per cent.; 13 tons, 8.9 per cent.; 8 tons, 9.10 per cent.; and 3 tons, 12.13 per cent. sulphate of quinine. The auctions contain only 492 tons of bark, instead of 500 tons, as previously stated.

WOODY IPECACUANHA AGAIN.

PERSONS interested in the drug trade, who, in the exercise of their business, entered Messrs. Lewis & Peat's show-rooms yesterday, to inspect the samples shown there, were surprised to find exhibited along with a sample of a bale of very woody ipecacuanha to be offered at to-day's auctions, a certificate from a Mr. R. A. Cripps, F.C.S., who has just taken over the late Mr. Rich's business of an analytical chemist, relating to the drug in question. Mr. Cripps, in a letter to Messrs. Lewis & Peat joined to the certificate, stated that "as the result of numerous assays," he is of opinion that a good average sample of ipecacuanha should contain from 2.1 to 2.2 per cent. of emetine. The wiry sample adjoined contained, according to this authority, 2.40 per cent. of emetine, and was therefore a "really good root, well over the average." Another sample, also analysed by Mr. Cripps, was declared by him to be scarcely up to the average. He had found it to contain 1.94 per cent. of emetine, and by carefully separating the residue of the specimen into root (1,420 grammes) and stem (1,020 grammes), he had ascertained the former to contain 2.10, and the latter 1.70 per cent. of emetine. In other words, the woody stalks of ipecacuanha, according to Mr. Cripps, are worth 80 per cent. of the value of the true root. If anyone were to reject the stems, concluded Mr. Cripps, he would be throwing away 35 per cent. of the value of the whole package.

Our representative heard a good many comments upon the unusual practice of the brokers in suspending an analytical certificate over a drug sample, and also upon the exceptional richness in emetine vouched for in the analysis. The brokers themselves pointed with evident gratification to the certificate as a complete answer to what they consider the attacks upon them that have recently appeared in this journal, and Cripps Certificates generally were at a premium in the "Lane" yesterday afternoon. "Who's Cripps?" everybody asked, the question suggesting one frequently met with on advertisement-posters, though whether the reply ought to be given in the familiar terms the future will show. Mr. Cripps has certainly succeeded in making a bold bid for renown, for at the sales to-day his certificate and the issue raised by it gave rise to a breezy and somewhat exciting interlude. It came to pass this way: When Mr. Andrew Devitt, of the firm of Lewis & Peat, had finished his sale of ipecacuanha, Mr. Richard Barron quietly rose and asked the auctioneer, on behalf of the London Chamber of Commerce, over the drug section of which he presides, for a copy of the Crippsian certificate, which he and the druggists associated with him "did not consider at all satisfactory," and concerning which the druggists in the Chamber would like to take such further steps as might commend themselves to them. "And," added Mr. Barron, "perhaps you would also send us a sample of the same bale of root which Mr. Cripps has analysed." Mr. Devitt's principals, thought Mr. Barron, would have no objection to redraw a sample. The druggists' organisation had taken up this question of the relative value of wood and root in the ipecacuanha consignments, and they wished to carry it to a definite issue, not only for the benefit of the drug trade, but also for that of the import merchants. They therefore counted upon the assistance of the brokers. It had been a matter of surprise to all the druggists who had read Mr. Cripps's analysis that he

should have obtained so high a percentage of emetine, not only in the root, but also in the woody stems, which, though well-known not to be altogether devoid of the alkaloid, were never suspected of containing the percentage Mr. Cripps believed to have found. They should like to make an independent analysis.

Mr. Devitt answered that his firm should be glad to give every assistance they could, and would send Mr. Barron the copy of the certificate and the samples asked for. The matter was evidently one of great interest. Only yesterday a gentleman connected with the Pharmaceutical Society had called upon him and asked for a sample of this root for analysis. With that the matter seemed about to drop, when Mr. Umney rose and imparted some fresh vigour to the incident. He made his views clear from the start. "I should be very sorry," said he, "if we did not publicly state our entire disbelief in the correctness of Mr. Cripps's analysis. In my opinion he is absolutely wrong, and if his figures are allowed to go forth unchallenged, we, British druggists, shall become the laughing-stock of the Continent. So far as my experience goes, I have never known of any ipecacuanha giving an analysis such as Mr. Cripps's certificate shows. We all know that the stems of ipecac. do contain emetine in a certain proportion; that is nothing new. What we *do* say is that the stems and the root are by no means as nearly identical in alkaloidal value as the certificate maintains. Taking the standard of emetine in the root at 100 parts, the average percentage in the stems is as low as 60 parts. So much for their respective value. When you sell cloves, Mr. Devitt, you don't mix up clove-stems and true cloves, and call that cloves. When the public buy milk they don't expect to get milk and water mixed. Why, the leaves of the plant, according to our experience, contain more emetine than the stems, and yet if the leaves were being sent over mixed with stalk and root would you put up the whole lot for sale and call it 'ipecacuanha'? By all means let the stem and leaves come over separately and sell them for what they are, and perhaps you may find a market for them. But let us call a spade a spade. Ipecac. is a most important drug, and in India, where it is largely administered in dysentery, it is a matter of life and death that it should be pure." Mr. Umney concluded by giving figures of former analyses, showing that a few years ago Mr. Ransom found the average of emetine in the drug to be 1.66 per cent., and J. C. Umney (at a paper read at the Leeds Conference) 1.625. Mr. D. Hooper, the Indian quino-logist, gave the average of root at 1.79 per cent., of stem at 1.13 per cent., and of leaves at 1.45 per cent.

Mr. Devitt, in conclusion, gave further satisfactory assurances with regard to the disposition of brokers and merchants, laying the blame upon the "rascals at the other side," and there the matter rests for the present.

THE CHINESE are as proud of old snuff as the average English country gentleman is of old wines. Many Chinese noblemen are able to offer their friends snuff which they have had for forty years, and it was the boast of a noted Mongolian millionaire that he had some which cost him over 150*l.* per lb.

EMPTY TINS are utilised in New York by burning off the solder with petroleum, the tin-plate being afterwards treated with acids. The tin thus dissolved is used as a basis for the preparation of stannates or other tin compounds, and by dyes. The iron-plate is rolled into balls for melting, and the ferrous sulphate purified and sold.

WHO WAS THE CHEMIST?—Mrs. Ernest Hart says she once went to a well-known chemist's for something requiring immediate attention, and was informed that it could not possibly be done that day, as the Countess of — was going away into the country, and had sent all her prescriptions to be made up—they being all carefully preserved for country dispensation to her poor neighbours and dependents.

NO ORANGE IN IT.—"You put up a prescription for me, to-day, and you did not put any orange-buds in it." "I did not," said the druggist, "but I put cloves in it." "You did! Why? I did not order any cloves," replied the doctor. "Yes, you did," and the druggist produced the prescription, showing that it read "*Caryophyllus aromaticus*." "There," said the doctor, "I told you I ordered orange-buds."



MISCELLANEOUS INQUIRIES.

The Editor replies to queries of general interest, in the order in which they are received. Replies are inserted according to the space available. Postal answers cannot be supplied.

Back numbers, containing formulae, educational or other specific information, can be obtained from the Publisher.

42/66. *Inquirer*.—To Preserve the Blood-mixture containing sarsa., &c., use chloroform-water as a diluent. There is nothing safer nor more effectual. DIARY, 1893, price 2s. 6d.

42/70. *Canary*.—Egg-food or Flake, containing Egg-yolks.—Mix hard-boiled yolks with a larger or smaller quantity of rice-flour. When put up as a food in packets, add a little powdered cayenne and white sugar. Proportion the quantity of rice to the bulk you wish and the profit. Must be kept in a dry place.

42/26. *Cetacei*.—Police usually renew the metal trappings of their uniforms when bright with some such solution as follows, finishing off with a soft rag and prepared chalk:—

						Drachm
Nitrate of silver	..	..	..	..	..	1
Mercury	..	..	..	..	..	2

Dissolve in open earthenware jar with nitric acid 1 part, water 2 parts, and when the action ceases dilute with water to 2 oz.

If the chains, &c., are brown or dull coloured, clean well, and after treating with a solution of chloride of antimony, or warm solution of arsenic, lacquer well.

40/41. *Subscriber*.—Furniture Paste, suitable for putting in penny boxes:—

Yellow wax	..	..	..	..	..	1 lb.
Resin	..	..	..	..	..	2 oz.
Spermaceti	..	..	..	..	..	2 oz.
Turpentine	..	..	..	..	..	3 oz.

The resin, spermaceti and yellow wax to be melted, and while still very warm added to the turpentine. Many people colour the turpentine with alkanet-root, which is a great improvement. Stir occasionally until cold, and, if necessary, increase the quantity of turpentine should it be too thick.

38/72. *S. S.*—Rosemary Hair-wash, for putting up in penny packets, usually consists of "salt of tartar," a few drops of oil of rosemary being added; or this:—Camphor, powdered, one drachm; salt of tartar, two ounces; oil of rosemary, twenty drops; mix; 5ij. in each packet.

41/29. *Vortex*.—Kieselguhr is an absorbent earth, in fine powder, consisting principally of minute diatoms, and is largely used for the absorption of nitro-glycerine in the preparation of dynamite.

40/58. *Wax*.—To colour paraffin wax green for leaves, use either an aniline or chromium green.

40/7. *E. A. S.*—Bichromate of Potassium is used to convert ordinary leather into an imitation of kid, and to keep the leather soft use tallow afterwards.

41/44. *Carboy*.—Red Solution for Carboys:—

Liq. ferri perch'lor. fort.	..	..	..	2 oz.
" ammon. acet. const.	..	..	..	4 oz.
Ac. acet. fort.	..	..	..	1 oz.
Aqua ad	..	..	..	2 gallons.

Stand for a week and filter.

The shade may be varied by varying the quantity of water.

42/28. *Z. X.*—Lacquer.—Turmeric, 1 oz.; gamboge, 1 oz.; sandarac and elemi, of each 2 oz.; dragon's blood and seedlac of each 1 oz., spirit, 1 pint. Macerate a week, and decant. This should suit the purpose if placed near a warm fire after applying to the metal, but all lacquers are more permanent when the metal has been warmed before applying.

30/28. *K. Lumber*.—Photographic Chemicals are sold retail at very fine prices, and to be able to do them advantageously retailers must buy large quantities. You should get prices from any of the chemical manufacturers or dealers who advertise in this journal.

30/19. *Jean B'anc*.—Black-leg or Quarter-evil.—To prevent this in calves is much beyond the influence of medicine, the most important point being regular feeding. The following drink may be given once or twice a week:—

Sulphocarbonate of soda	..	..	..	3j.
Concentrated infusion of orange	..	..	..	5i.
Treacle	..	..	..	5ij.
Water to	..	..	..	5x.

Mix.

30/41. *Radix*.—A booklet by Mr. Allan, of Liverpool, entitled "Table of B.P. Doses," is published by Bailière, Tindall & Cox at 6d.

30/64. *Relwof*.—The varnish used along with bronze-powder for bronzing iron and steel is the usual seedlac lacquer; strength 3 oz. to 4 oz. of seedlac to 1 pint of spirit.

30/12. *Weed-killer*.—See reply to "Weeds," page 640.

31/50. *Hants*.—A Cold Cream made from a petroleum basis retains water with difficulty, and your preparation is somewhat soft. Replace 1 oz. of the spermaceti with 2 oz. of hard paraffin, and add 4 oz. of lard, thus making the formula:—

Cerae albæ	..	..	..	..	..	5vj.
Cetacei	..	..	..	..	..	5i.
Paraffini duri	..	..	..	..	..	5i.
Adipis	..	..	..	..	..	5iv.
Ol. petrol. alb.	..	..	..	..	..	5xxvij.

Melt, and add the following:—

Pulv. boracis	..	..	..	..	..	5iiss.
Aq. flor. aurantii	..	..	..	..	..	5ivss.
" destillat.	..	..	..	..	..	vij.

Mix well.

Let us know your results.

31/59. *W. J.*—An aniline black is obtainable which is soluble in methylated spirit. Try E. Crawshaw & Co.

203/23. *D. W.*—We gave a formula for Spirit-varnish in our issue of December 12, 1891, page 862; and the Grocers' Association list of patent medicines on March 4, 1893, page 310.

32/68. *G. D. Co.*—One minim of liq. morph. hydrochlor. to the teaspoonful of anise-flavoured syrup should not be exceeded in Soothing-syrup for children. The narcotic powerfully affects them. Also add to each teaspoonful 1 grain of bicarbonate of potash.

31/38. *Zinci* asks our opinion of the suitability of the following formula for the label which is appended:—

Quinia. sulph.	gr. iij.
Dec. sarsæ co.	ʒiiss.
Liq. taraxaci	ʒij.
Pot. iodid.	ʒj.
Inf. quassie (4 times the strength B.P.) . . .	ʒiiss.
Ol. sassafras	ʒij.
Liq. potassæ	ʒss.

The label is couched in the following terms:—

Marvellous Blood-purifier.—Is used with great success in all classes of skin and blood diseases (whether acute or chronic), including scrofula, scurvy, scrofulous sores, glandular swellings, ulcers, boils, bad legs, pimples on the face, sore eyes, eruptions on the skin, and all diseases arising from impurity of the blood. Directions.—The mixture should be taken after meals, three times a day, in the following doses: For adults, a tablespoonful, &c.

As quinine sulphate and liq. potassæ, are incompatible it is just as well not to put in the quinine. Otherwise the mixture is a good one as such mixtures go, but it should not be given to children. We should prefer the old *mistura gentiane* to quassia as a bitter. It is a much nicer preparation, and keeps better. The dose should be a small tablespoonful.

32/17. *Nil Desperandum*.—See the last Educational Number of the *C. & D.*, September 17, 1892, where you will find all information regarding the Minor examination.

32/71. *Ravenscroft*.—There is no trustworthy book, but we hope to include one in our series ere long.

33/41. *Nemo*.—(1) The only difference between *Spt. Ammon. Arom.* distilled and undistilled is that the latter is apt to turn yellow on keeping. (2) The reason for putting a "shake the bottle" label on hydrocyanic-acid mixtures is because the vapour of the acid fills the air-space, and by shaking most of it is dissolved. (3) The *Bloom of Lilies* is a very nice powder. Perfume with neroli and a trace of rose. The perfume must be rubbed up for at least ten minutes with some of the precipitated chalk; in fact, the longer you triturate the finer the perfume becomes. (4) *Easton's Syrup*.—Both you and "Squire" are wrong in supposing that this syrup should contain $\frac{1}{32}$ grain of phosphate of strychnine in a fluid drachm. The original formula provided for $\frac{1}{32}$ gr. of the alkaloid strychnine; in fact, all the expressions were somewhat loose, and since Dr. Easton published his formula the preparation has undergone many metamorphoses. His formula was simple. Dissolve $2\frac{1}{2}$ oz. of sulphate of iron and 3 oz. of phosphate of soda in separate portions of water (the more the better) collect the precipitate, wash well, drain, dissolve in 56 oz. of acid. phosph. dil., add $1\frac{1}{2}$ oz. and 48 grains of quinine and 24 grains of strychnine; dissolve and filter. In the filtrate dissolve 56 oz. of sugar. To that we append your note for the opinion of our readers, as you desire:—

Will you put it to your readers to say if they can, in making Easton's syrup by Squire's formula, keep it within 24 fl. oz., as you say it ought to be? I think you are wrong on that point, though: 6 grains of strychnine would weigh when converted into phosphate more than 6 grains. As you based your quantity upon the fact that there is 6 grains of phosphate of strychnine, it is evident, to me at least, that your answer is not quite correct. Perhaps the authors of Squire's "Companion" would make an authoritative remark upon the matter if they were asked by you. Perhaps you would also say which formula is the most correct. I have seen a good many samples, and there do not seem to be two alike. I hope to see it introduced into the next edition of the B.P.

34/40. *Zylobalsam*.—The difference between potash alum and ammonia alum is represented by the formulae— $Al_2K_24SO_424H_2O$ and $Al_2(NH_4)_24SO_424H_2O$. The difference is really not material in photography. Ammonia alum is the more common nowadays owing to ammonium sulphate being the cheaper salt.

34/5. *Remo*.—There is nothing that can be added to baking-powder to give bread a white appearance.

34/15. *Agricultural*.—You will have noticed the replies which have been given to others on the same subject. See "Weed-killer" above.

34/13. *Ezebr*.—(1) *Liquor Cocci Cacti*:—

	Oz.
Powdered cochineal	2
Carbonate of potash	3
Glycerine	8
Distilled water	24

Rub the cochineal and potash together in a large mortar, gradually adding the glycerine, then the water. Allow to stand for two hours, occasionally rubbing; then add the following powder, intimately mixed:—

	Oz.
Cream of tartar	2
Potash alum	3

When effervescence has ceased filter the liquid, and reserve the filtrate. Now wash what remains in the filter with distilled water as long as any appreciable amount of colouring is obtained, and evaporate this second filtrate, so that the residue, added to the first, will make 32 fl. oz. If not quite clear, filter or set aside to deposit, and decant.

(2) You cannot prevent any liquid dentifrice from depositing when placed in the sun.

34/71. *Country*.—It is quite possible that the lambs of ewes which have recently been dipped in mercurial dip would be affected through the milk. The more prominent symptoms of mercurialism, according to Tuson, are:—"Large quantities of faeces are passed, including much mucus; the kidneys and skin are unusually active; the mouth becomes tender; the gums red, soft and swollen; the breath fetid, &c." We are glad to know that you find "Veterinary Counter Practice" so useful in your business.

34/73. *Dens*.—The cocaine carbolate is a salt which keeps better in solution than the others, and is recommended for that reason. Have you tried any wholesale house for it?

34/64. *R. A. G.*.—We have no idea of the composition of Widow Welch's pills.

38/12. *Apprentice*.—A "soluble" ext. coca liquid, is procurable which is the same in therapeutic action as the official preparation. The muddiness on mixing with water is due to waxy matter, &c.

38/1. *Stieker*.—You will find the more common formulae for aerated beverages in past numbers of the *C. & D.* Essence of Hot Tom Bitters is usually made after the following fashion:—

Tincture of capsicum	ʒj.
Concentrated infusion of quassia	ʒix.
Cochineal to colour.	

A little of any suitable flavour (such as banana or jargonelle) may also be added.

38/15. *Avis*.—The use of depilatories is likely to cause the hair to grow more luxuriously, because they are irritants, and most articles of that nature do stimulate hair-growth.

38/31. *Carolus Rex*.—The cloudy-ammonia formula will be found on page 434 of the current volume.

38/32. *Athlonensis*.—*Lithia-powders* for 5-pint seltzogene.—Thirty grains of the carbonate should go into each powder. This is about all that will dissolve in the vase. For Seltzer:—Common salt ʒij., carbonate of magnesia ʒj. in each powder.

33/16. *Argentina Pura*.—Common washing-soda increases the solubility of arsenic in water.

38/42. *Rae*.—(1) You must ask the permission of the Board of Inland Revenue to make lin. capsici with methylated spirit. Such a preparation need not be labelled "Poison" unless you like. (2) You should tell us what formulæ for liquid glue are not satisfactory, and what your reasons are for so saying.

38/14. *W. H. R.*—(1) You can get the Throat Hospital Pharmacopœia from any medical bookseller—Kington or Lewis, for example. (2) *Baume du Commandeur*:—

	Grammes
Angelica-root	10
Hypericum herb.. .. .	20
Myrrh	10
Olibanum.. .. .	10
Aloes	10
Balsam of tolu	60
Benzoin	60
Rectified spirit	650
Water	70

Make a tincture by maceration.

(3) The article is of German origin, and resembles creolin.

36/64. *Disinfectants*.—There is no book devoted exclusively to the subject of coal-tar disinfectant manufacture. See, however, "Thorpe's Dictionary," the article on "Disinfectants."

36/4. *Zulu*.—"How to Become a Hospital Nurse," by Alice Dannatt, published by the Record Press, 376 Strand (1s.), will probably tell you what you want to know.

40/3. *J. J. H.*—Girls at 10s. a week (more or less) are largely employed in bottling proprietary medicines, &c.

39/44. *W. G. S.*—Dry-powdered Soaps generally consist of a good ordinary soap, well dried and powdered, mixed with an equal quantity of dried washing-soda. Some also contain a trace of lime. You might add a trace of some cheap essential oil.

197/14. *Aston*.—There is no means of preventing the unpleasant smell left in a room where cigars and tobacco have been freely used, except by thorough ventilation, with open windows and doors, for a considerable time each day. A large vessel containing sanitas or aromatic vinegar and boiling water left in the room for a time would tend to sweeten it. For the clouding of mirrors, frequent cleaning with methylated spirit and chalk is the only remedy.

39/43. *Salopia*.—Solution of Bisulphite of Lime is much used by brewers to sweeten their casks, and would be very useful to sprinkle over malt to prevent its becoming mouldy. In weak solution it is not likely to harm the malt.

197/38. *Flat-head*.—The only way to utilise Ammon. Acet. as B.P. liquor is to make a solution sp. gr. 1.070, and consider this equivalent to liq. ammon. acet. fort. The crystals, if in stock for any time, might vary considerably, hence the gravity is your best guide as to the strength of your solution. This gravity varies slightly from the B.P., but is what is given by Proctor as correct.

34/68. *Coker*.—Milk of lime (freshly-slaked lime and water) seems to be the Emulsifying Agent used for the Coke-oven Oil.

37/5. *J. D. S.*—The Graph or "printing-slate" composition consists of gelatine, glycerine, water, and fine whiting or prepared chalk. The chalk is in much greater quantity than is usually found in such preparations, and by preventing the ink penetrating so quickly under the surface will allow of its being more easily cleaned, and a trial or two will enable you to fix upon the proper proportions.

38/20. *N. H.*—*Sausage-seasoning*.—Besides white pepper and coloured salt, it contains a trace of cayenne pepper, all-spice, and a fair proportion of rice powder.

39/670. *Gout*.—Your sample of Mixture good for Gout, Rheumatism, and Eczema is an alkaline saline with a weak bitter tonic. This you will find similar and useful:—

Vin. colchici	℥v.
Pot. nit.	gr. v.
Magn. sulph.	gr. xx.
Pot. bicarb.	gr. x.
Inf. gent. co.	5℥j.
Aqua ad	3j.

Ter in die.

Add sacch. ust. q.s. for colour. An addition of pot. iodid. gr. iiss. would in most cases improve the effect.

43/39. *W. H. G.*—"The Art of Dispensing," from any wholesale druggist, 3s. 6d.

LEGAL QUERIES.

Immediate information on pharmaco-legal matters is available in "Pharmacy and Poison Laws of the United Kingdom," Alpe's "Handy-book of Medicine-stamp Duty," and THE CHEMISTS' AND DRUGGISTS' DIARY, page 152 et seq.

42/43. *Odonto*.—The title of dentist is strictly protected by law in the colonies of Victoria and Tasmania, and we think in New Zealand. Legislation of a similar character has been introduced in New South Wales and Queensland.

42/3. *A. C.*—If a "custom of the trade" as to the length of notice can be proved, it would be that of one month. The manager of a branch could not claim more than a month's notice on the ground that it was a "custom of the trade," but he might satisfy a Judge that under the special circumstances named one month's notice was not reasonable.

43/67. *Sulphonol*.—Accept the hearing which the Registrar offers and give him as many instances as you can collect. Send the circular to Somerset House.

32/18. *Carbo Ligni*.—We have previously tried to ascertain whether anybody has or claims to have a proprietary right in the title "Bow's Liniment." It appears to be used very generally, and we suppose is common property.

Next Week.

Meetings, &c., to be held, and business to be transacted thereat. Suitable notices will be inserted in this section if received by the Editor on or before Wednesday.

WEDNESDAY, May 31.—*Nottingham and Notts Chemists Association*. Annual meeting at the Masonic Hall, Goldsmith Street, at 9 P.M.

WEDNESDAY, May 31.—*Edinburgh Pharmacy Athletic Club*. Annual athletic sports, at 6.30 P.M.

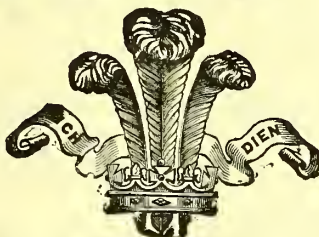
THURSDAY, June 1.—*Chemical Society*, at 8 P.M., "Azo Compounds of the Ortho Series," by Professor Meldola, F.R.S., and F. B. Burls. "The Fluorescence of Camphoric Anhydride," by Dr. Collie. "The Action of Phosphoric Chloride on Camphene," by J. E. Marsh, M.A., and J. A. Gardner, M.A. "The Composition of Jute Produced in England," by A. Pears, jun.

FRIDAY, June 2.—*Royal Institution of Great Britain*, at 9 P.M. Professor Osborne Reynolds, M.A., LL.D., F.R.S., on "Study of Fluid Motion by Means of Coloured Bands."

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	1s.6d.	„	Ditto ditto	8s.
	2s.6d.	„	(The Washing Tablets are perfumed with Otto of Roses)	12s.
				20s.
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Hydrobromic Syrup of Hypophosphites.

Fine quality, keeps well. 6/6 lb.

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We have quite recently had printed for us some little booklets on Caffyn's Liquor Carnis and Malto-Carnis almost identical with those we had done on VIROL! If there are any Chemists who have a stock of LIQUOR CARNIS or MALTO-CARNIS and would like to have a few of these Booklets to hand around to local medical men, we will be pleased to mail some.

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Glass Jars.

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See *The Chemist and Druggist* Report on VIROL, May 6, 1893.

Also

The Lancet on VIROL, page 1,144, May 13, 1893.

Or

The British and Colonial Druggist, May 12, 1893, Page 461.

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CAMPHOR.

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COMPRESSED CAMPHOR,

In Half-ounce and One-ounce Blocks.

EACH CASE CONTAINS 200 ONE-LB. PACKETS.

THREE TO THE OUNCE. NOW ON PASSAGE.**DUE HERE END OF THE MONTH.**Regular supplies of blocks will be obtainable as well as **FLOWERS OF CAMPHOR** for Manufacturing Purposes. Smaller quantities than a case can be obtained of the Wholesale Houses.

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This is a special preparation, quite different from Spir. Chloroformi P.B., perfectly miscible with water, and always of the same strength.

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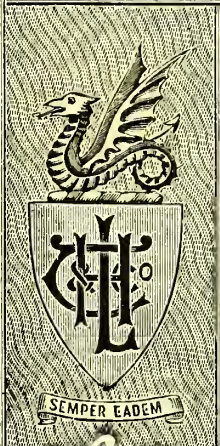


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APERIENT. 105 (<i>Each Pill contains 1/2 gr. of Calomel</i>)	6d.	4/3
106 As No. 105, with 1 gr. Calomel in each Pill	6d.	4/6
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110 Hospital Pills, each containing 1/2 gr. of Calomel	6d.	4/6
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62 Hydrarg. Pil. gr. i.; Ext. Coloc. Co.; Pil. Rhei Co. aa. gr. ij.	1/-	8/6
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COUGH.		
164 Pulv. Ipecac. Co.; Pulv. Gum. Ammon. aa. gr. iss.; Pulv. Scilla gr. i.; Saponis Hispan. gr. ss.	7d.	5/-
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PURE AND CHEAP.

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Mono Carbonate of Soda	1.90
Sulphate of Soda	trace
Chloride of Sodium035
Moisture82
Insoluble	nil

PURE ALKALI,

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Most economical form of Soda for the use of Printers,
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Only 1 lb. of Concentrated Crystal Soda required to do the work of 2 lbs. of Washing Soda.

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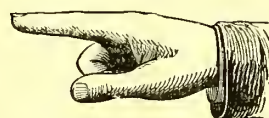
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"The boxes are very distinctive."

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SCHERING'S PIPERAZINUM PURUM

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NON-TOXIC AND NON-IRRITANT.

Readily soluble in water. It dissolves Uric Acid concretions twelve times more freely than Lithia Carbonate.

Is indicated in all cases of Gouty Affections, and in Stone or Gravel of the Bladder and Kidneys.

For literature see "The Therapist," Vols. I. and II., published by Aug. Siegle, 30 Lime St., London, E.C.

PIPERAZINE may be obtained in Crystals wholesale at **17/6** per oz. net, or in 1-GRAMME COMPRESSED TABLETS; pure, without any admixture, Schering's own manufacture, at **7/6** per dozen gramme Tablets.

Minimum Dose—1 Gramme or 15 Grains per day in a Pint of Water.

This may be divided into two or three portions during the day.

PHENOCOLL HYDROCHLORIDE

(PATENT).

NON-TOXIC, AND HAS NO EFFECT ON THE HEART.

This is a preferable analgesic having no toxic effects, nor does it interfere with the circulation of the blood, nor the heart, nor does it reduce the temperature below normal.

Is indicated in all cases accompanied by feverish symptoms, particularly in Rheumatism, Neuralgia, and similar ailments.

MALARIAL FEVER YIELDS TO NO OTHER REMEDY SO WELL.

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Maintain their high reputation against all comers for general excellence of quality and finish.

SPECIAL LINES.

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CHLORATE OF POTASH AND BORAX	1/-	/11
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SODA BICARB.	1/-	/11
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NET CASH WITH ORDER.

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PEPSINES $\frac{c}{c}$ PEPTONES $\frac{c}{c}$ PANCREATINES $\frac{c}{c}$

LATEST AWARDS:

Calcutta, 1883, First Class Certificate and Gold Medal; Sydney, 1888, Gold Medal;
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PARIS UNIVERSAL EXHIBITION, 1889, GOLD MEDAL.



Quotation of some PEPSES $\frac{c}{c}$ PEPTONES $\frac{c}{c}$ PANCREATINES $\frac{c}{c}$

Pure Extract Pepsine $\frac{c}{c}$	(French Pharmacopœia) standard 50	26/6 per lb. net.
Amylaceous Pepsine $\frac{c}{c}$	(French Pharmacopœia) „	20 11/ „ „
Pepsine in scales $\frac{c}{c}$	„ „ „ „ „	30 17/ „ „
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Liquid Pepsine $\frac{c}{c}$	„ „ „ „ „	25 123/ per gall. net.
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Dry Beef Peptone $\frac{c}{c}$	„ „ „ „ „	— 12/ „ „

Quality and standards warranted. Pepsine of lower or higher standards manufactured.

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Sole Agents for the United Kingdom—**FUERST BROS., 17 PHILPOT LANE, LONDON, E.C.**
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FOREIGN SPECIALITIES & MEDICINES.

REVISED PRICE LIST.

ROBERTS & CO.
FOREIGN AND ENGLISH CHEMISTS,
WHOLESALE, IMPORT, AND EXPORT AGENTS FOR
FOREIGN MEDICINES AND PATENTS,
76 NEW BOND STREET, LONDON.

Messrs. Roberts & Co. beg to inform the Trade that they are Agents for all the principal French and Foreign Specialities and Medicines, a large supply of which they have always on hand, and can supply on very favourable terms. They are in daily communication with their Paris House, and can offer exceptional facilities for procuring New Medicines, &c., &c., with very little delay. The following is a list of a few that they name as *hasard*, and that have a large sale:—

Retail	Per doz.	Retail	Per doz.	Retail	Per doz.	Retail	Per doz.
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2/8..Ditto ditto	21/	4/6..Mathay Caylus	35/	9/..Laville's Gout Tinoture	81/	7/..Elixir Ferrug.	65/
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1/8..Pâté	15/	2/9..Pills	24/	1/1/2..Papier Fayard	6/9	4/..Racahont des Arabes	31/
6/6..Bay Rum	57/	4/6..Clin's Dragées Bromide Cam.	45/	2/3..Ditto	13/6	4/6..Reynal's Bougies	38/
3/6..Ditto	31/	5/..Eau de Botot (Genuine)	40/	2/3..Papier Fruneau	14/6	2/9..Ricoerd's Injection	24/
2/..Belloe's Charcoal	15/	3/..Ditto	24/	4/..Ditto	24/6	4/6..Capsules	36/
1/9..Lozenges	15/	2/..Espio's Cigarettes	13/6	1/8..Pâté d'Aubergier	15/	9/..Syrup	90/
4/6..Blancard's Pills	32/	4/6..Elixir de Coca (Mariani)	48/	1/9..de Berthé	15/6	1/6..Star Paper	11/
2/6..Ditto	18/	2/9..Flon's Syrup	23/	2/8..de Coon Mariani	25/	1/9..Vallet's Pills	14/6
4/6..Bren's Injection	27/	1/8..Gayetty's Paper	14/6	1/8..de Georgé	23/	2/9..Ditto	23/
4/6..Bugeaud's Wine	36/	2/3..Granules Arsen. Aoid	13/6	1/1/2..Ditto	9/	4/6..Veloutine (White, Pink, Oim.)	22/
3/6..Bully's Vinegar	30/	2/9..Iron	14/6	1/6..de Nafé	13/6	3/6..Ditto ditte	22/
2/..Ditto	14/6	2/9..Soda	15/4	1/9..Regnaud	14/6	2/9..Vichot's Trochisques	22/
4/6..Oandé's (Lait Antéphilic.)	36/	2/9..Grimault's Syrup Lime	24/	7/..Pierlot's Valerian	60/	4/6..Via Mariani	36/
4/6..Capsules Bromide Camph.	45/						

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**SALICYLIC ACID
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Manufacturing Chemists.

Seasonable Lines for Chemists.**SOLUBLE ESSENCES,**

Specially prepared for the manufacture of Cordials, &c., producing a Rich Flavour and Brightness.

CONCENTRATED FRUIT ESSENCES.**LIME FRUIT CORDIAL**

It produces a Delicious, Wholesome, and Refreshing Beverage when mixed with either plain or Aerated Waters.

SALINE, Gran. Efferves.**MAGNES. CIT. Gran. Efferves****RASPBERRY CITRATE, Gran. Efferves.**

In Bulk or in Bottles, with Chemist's own Name.

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Vanilline
Crystals
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Celerina,
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From the British
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A purely Vegetable Ferment which is superior to Pepsin and Pancreatin, as it digests in Acid, Alkaline, and Neutral Media (see published Reports of the Medical Press).

PAPAIN (Dr. Finkler & Co.) is now packed in bottles containing 1, $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$ ounce. Each bottle bears the Trade Mark and Signature—accept no other,



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PAPAIN (Dr. Finkler & Co.) is also supplied in Pills, Tablets, Lozenges, and the following Liquores Co.:—Acid Glycerine, Iridin, Bismuth, Cascara Sagrada.

SOLD BY ALL WHOLESALE DRUGGISTS AND RETAIL CHEMISTS.

B. KÜHN, 36 St. Mary-at-Hill, LONDON. Sole Universal Depot.

OXY-IODINE COMPOUNDS.

AS SUGGESTED BY DR. HUGH WOODS.



Liq. Calcis Iodinatae.—A solution of Hypiodite of Calcium. Very effective in curing Gout, Rheumatism, Syphilis, Strumous or Tubercular Disease, Goitre, &c. Highly antiseptic and deodorant. Dose—M. v. to xx. Price, 4-oz. bottles, 1/2; 8-oz., 2/; 16-oz., 6/3.

Liq. Potassæ Iodinatae.—A solution of Hypiodite of Potassium. An extremely powerful, safe, and unirritating antiseptic. Useful in same diseases as above. Cures parasitic and other skin diseases. Dose—M. v. to x. Price, 4-oz. bottles, 1/4; 8-oz., 2/4; 16-oz., 4/.

Red Oxyiodide of Bismuth.—Very superior to Iodoform. Odourless and unirritating. Powerfully antiseptic. Cures wounds, sores, eczema, intertrigo, chapped hands, sweating feet, &c. Price 1/6 per oz.; ointment (1 in 10), 3/6 per lb.

Yellow Oxyiodide of Bismuth.—An excellent antiseptic application to the throat, nose, &c. Very valuable for internal use in cancer of the stomach, gastric ulcer, dyspepsia, vomiting, &c. Dose—5 to 20 grains. Price, 1/4 per oz.; ointment (1 in 10), 3/ per lb.

Leaflets descriptive of above, and monthly Price Current, on application.
Special terms to Hospitals and Public Institutions.

WILLOWS, FRANCIS & BUTLER, WHOLESALE AND EXPORT DRUGGISTS,
ESTABLISHED 1751,
101 HIGH HOLBORN, LONDON, W.C.

BARRON, HARVEYS & CO.

GILTSPUR STREET, LONDON, E.C.

Beg to inform their friends and the Trade generally that, having purchased the Business of

BARRON, SQUIRE & CO., BUSH LANE,

and also the various Formulæ of the Special Preparations of

JAMES BASS & SONS, HATTON GARDEN,

they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS.

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that "Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital."

The VICE-CHANCELLOR also stated, "that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection."

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated, "that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor."

LORD JUSTICE JAMES, on appeal, stated in his judgment, "that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood."

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and other were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, Dr. J. Collis Browne's Chlorodyne, is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND



ONLY GENUINE.

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

Apothecaries' Hall,	London	Frazer & Green,	Glasgow	Morson, T., & Son,	London
Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	"
Baiss Brothers,	"	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Richards,	Birmingham	Goulding, Messrs.,	Cork	Parsons & Richardson,	Leicester
Barron, Harvey & Co.,	London	Gratton & Co.,	Belfast	Peake, Allen, & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	York
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	Edinburgh
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Sang & Barker,	"
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sanger, J., & Sons,	London
Curling & Co.,	"	Hopkins & Williams,	"	Sim, James, & Co.,	Aberdeen
Curtis & Co.,	"	Hovenden, R., & Sons,	"	Smeaton, W.,	Leeds
Davy, M'Murdo & Co.	"	Hunt & Co.,	Exeter	Southall & Co.,	Birmingham
Dobbin, W., & Co., Limited,	Belfast	Hunt, A., & Co.,	"	Sutton, W. & Co.,	London
Drew, Barron & Co.,	London	Johnson, J. H. & S.,	Liverpool	Tomlinson, Hayward & Co.,	Lincoln
Drew, B., & Alexander,	"	Langton, W., & Co.,	London	Treacher, Hodgkinson & Co.,	London
Dunn & Company,	"	Lynch & Co.,	"	Westrup, J. B.,	Kensington
Edwards, W.,	"	Mander, Weaver,	Wolverhampton	Westwood & Hopkins,	London
Evans, Gadd & Co.,	Exeter	Marsden & Sons,	London	Woolley, James,	Manchester
Evans, Lescher & Webb,	London	Maw & Son,	"	Wyleys & Brown,	Coventry
Ferris & Co.,	Bristol	Meggeson & Co.,	"	Yates & Co.,	London
Foulger, S., & Son	London	Mackay, John, & Co.,	Edinburgh		

After these public statements in a Court of Equity, and subsequent confirmation by the Trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

Sold in Bottles—1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

SOLE MANUFACTURER,

J. T. DAVENPORT, Pharmacist,
33 GREAT RUSSELL STREET, BLOOMSBURY SQUARE, LONDON.

CAUTION!

SPECIAL NOTICE TO THE TRADE

LION OINTMENT & PILLS.

DEACON v. BURGESS.

In the High Court of Justice, Chancery Division, on Saturday, December 17th, Mr. Justice Kekewich, in delivering judgment, said "that it will be sufficient, I think, and I am sure quite safe now to say that the plaintiff (Mr. H. J. Deacon), who certainly has not proved his knowledge of the genuineness, but who has clearly indicated his ignorance, and who is attempting to sell as genuine medicine that of which he is really ignorant." N.B.—A full report of the Judgment appeared in THE CHEMIST AND DRUGGIST, December 24 last.

CHEMISTS ARE PARTICULARLY REQUESTED TO ORDER

E. BURGESS, JUNR.'S, LION OINTMENT AND PILLS,

And to see that the Label bears Address,

59 GRAY'S INN ROAD, W.C.

As these are the ONLY GENUINE Goods, and this fact will be EXTENSIVELY ADVERTISED THROUGHOUT THE KINGDOM.

The Trade is respectfully requested to refer to the issues of "THE CHEMIST AND DRUGGIST" of December 10 and 17, and to read the Statutory Declaration made by E. Burgess, Junr., before the Lord Mayor of London. E. B., Junr., is the only person living with the knowledge of method of manufacture of these Remedies, and all statements to the contrary are untrue.

BEECHAM'S TOOTH PASTE.

All Chemists, Druggists, and Stores should Stock this new article, which is being well advertised, and, as it is a really good speciality, will shortly be in great demand. It is put up in collapsible tubes, retail price 1/-, and can be obtained from any Wholesale House.

BEECHAM'S PILLS

The most saleable Patent Medicine in the market.

In Boxes 9½d., 1s. 1½d., and 2s. 9d. each.

HOME RETAILERS desirous of exhibiting Iron Tablets, Showcards, or Dummies, and wishful to have a good supply of Handbills, Beecham's Oracles, Music, &c., are requested to notify their requirements to the Proprietor,

THOMAS BEECHAM, St. Helens, LANCASHIRE.

A NON-TOXIC ANTISEPTIC FOR BOTH INTERNAL AND EXTERNAL USE.

LISTERINE.

NON-TOXIC NON-IRRITANT, NON-ESCHAROTIC—ABSOLUTELY SAFE, AGREEABLE, AND CONVENIENT.

FORMULA.—LISTERINE is the essential antiseptic constituent of Thyme, Eucalyptus, Baptisia, Gaultheria and Mentha Arvensis, in combination. Each fluid drachm also contains two grains of refined and purified Benzo-boracic Acid.

DOSE.—Internally: One teaspoonful three or more times a day (as indicated), either full strength, or diluted, as necessary for varied conditions.

LISTERINE is a well-proven antiseptic agent—an antizymotic—especially useful in the management of catarrhal conditions of the mucous membrane, adapted to internal use and to make and maintain surgical cleanliness—asepsis—in the treatment of all parts of the human body, whether by spray, injection, irrigation, atomization, inhalation, or simple local application, and therefore characterized by its particular adaptability to the field of

PREVENTIVE MEDICINE—INDIVIDUAL PROPHYLAXIS.

LISTERINE destroys promptly all odours emanating from diseased gums and teeth. It is a perfect tooth and mouth wash, Indispensable for the Dental Toilet.

DISEASES OF THE URIC ACID DIATHESIS.

Lambert's Lithiated Hydrangea.

RENAL ALTERNATIVE—ANTI-LITHIC.

FORMULA.—Each fluid drachm of "LITHIATED HYDRANGEA" represents thirty grains of FRESH HYDRANGEA, and three grains of CHEMICALLY PURE Benzo-Salicylate of Lithia. Prepared by our improved process of osmosis. It is INVARIABLY of DEFINITE and UNIFORM therapeutic strength, and hence can be depended upon in clinical practice.

DOSE.—One or two teaspoonfuls four times a day (preferably between meals).

Gross Clinical observation has caused LAMBERT'S LITHIATED HYDRANGEA to be regarded by physicians generally as a very valuable Kidney Alternative and Anti-lithic agent in the treatment of

Urinary Calculus, Gout, Rheumatism, Cystitis, Diabetes, Hæmaturia, Bright's Disease, Albuminuria, and Vesical Irritations generally.

REALIZING that in many of the diseases in which LAMBERT'S LITHIATED HYDRANGEA has been found to possess great therapeutic value it is of the highest importance that suitable diet be employed. We have had prepared for the convenience of physicians

DIETETIC NOTES,

suggesting the articles of food to be allowed or prohibited in several of these diseases. A book of these Dietetic Notes, each note perforated and convenient for the physician to detach and distribute to patients, supplied, upon request, together with literature fully descriptive of LISTERINE and LAMBERT'S LITHIATED HYDRANGEA.

S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, London, E.C.,

British Agents for the Products of LAMBERT PHARMACAL CO., St. Louis, U.S.



HARROLINE PILLS.

The Great Harrogate Tonic.

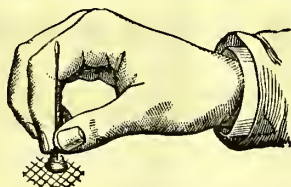
An unfailing Cure for Poverty of Blood, Anæmia, Chlorosis, and every form of Debility arising therefrom.

1s. 1½d. and 2s. 9d.

WHOLESALE FROM THE
HARROLINE PILL CO.
HARROGATE.

FULL PARTICULARS & TERMS ON APPLICATION.

Trade Mark.



Registered.

THE

ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH

12x PALL MALL EAST, LONDON, S.W.

SOLE AGENTS FOR

DR. WARLOMONT'S CALF VACCINE

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 1s.

HUMAN VACCINE, from healthy children only, microscopically examined and sources quoted. Tubes two-thirds full, 1s. 3d. each; Tubes one-third full 1s. each; Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, 25 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. P.O.O.s (including postage, and crossed London and Westminster Bank) with orders, payable to EDWARD DARRIS, Secretary.

Office hours, 10 to 4. Saturdays 10 to 1.

10. PILLS!! SUGAR-COATED!! 10. PILLS!!



Medicine made pleasant for all. The Cheapest and Best Family Medicine The most Saleable Article in the Market Composed of the purest Drugs. Will keep good in all climates any length of time.

The following varieties are put up in Glass Tubes, on Cards of 3 doz., or in gross boxes, at one penny per tube:—

Antibilious	Hamilton
Asafetida	Liver
Blaud	Podophyllin
Castor Oil	Quinine
Colocynth	Rhubarb
Dandelion	Tonic
Female	Vegetable, &c.

Other varieties can be had if required. Terms—7s. per Gross, cash; 6 Gross assorted, in handsome mahogany glass case for 42s. Sent free by parcel post on receipt of P. O. Order or Postage Stamps. Agents and Purchasers of large quantities get a liberal discount. Send for Sample.

Aromatic Camphor, Chlorate of Potash Pellets and other varieties put up as above at same price.

AGENTS WANTED.—APPLY AT THE

Anderston Apothecaries' Hall, Washington St., GLASGOW.
Telegraphic Address—"Liliputian Glasgow."

DENOVAL'S MEDICINAL CAPSULES

ARE THE BEST AND CHEAPEST.

Attention is called to the following articles:—

ON THESE MEDICINAL CAPSULES

CHEMISTS ARE ALLOWED
LARGE PROFIT.

SANTAL OIL CAPSULES, PERUVIAN MIXTURE CAPSULES, COPAIBA BALSAM CAPSULES, CUBE OIL AND COPAIBA CAPSULES, MALE FERN CAPSULES.

ALL KINDS OF CAPSULES.

DENOVAL'S INJECTION.

ALL DRUGS WARRANTED TO BE GENUINE.

JULES DENOVAL,

Carlton House, 4 New Cross Road, London, S.E.

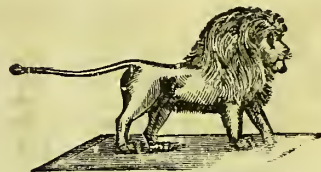
Examine your Stock. Every genuine Box and Bottle has the Lion Trade Mark on.



Facsimile of Ointment
and Pill Label.



REGISTERED



TRADE MARK.

BURGESS'S LION OINTMENT, PILLS, & NERVE TONIC.

(Late Proprietor, E. BURGESS, of Holborn, W.C.)

The Proprietary Rights in the above Ointment, Pills, and Nerve Tonic, also goodwill of business, together with all Trade Marks, Registered at Home and Abroad, **HAVING BEEN PURCHASED BY ME OF THE SENIOR OFFICIAL RECEIVER, Mr. GEORGE WREDFORD** (he being Trustee to the Estate), all ORDERS and communications should be sent to address at foot.

Notice is hereby given that all those infringing my rights, either by preparing or selling spurious Ointment, Pills, or Nerve Tonic, will be at once proceeded against.

H. J. DEACON, Chemist,

15 BROMLEY ROAD, BECKENHAM, KENT.

November 14, 1892.

WILLIAM BURTON & SONS, BETHNAL GREEN, LONDON.

Hydrogen Peroxide, Indigo Extract, Soluble Indigo Powder, Orchil, Cudbear, Logwood Extract, Fustic Extract, Aniline Dyes, Fine Lakes for Lithographic Inks, Vermilionettes, Drysalteries.

Sole Agents in United Kingdom and Colonies, excepting Canada, for

The New Bleach, **SODIUM PEROXIDE** (Aluminium Co., Ltd.).

GENUINE EAU DE COLOGNE

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Gegenüber dem Laurenz Platz

2-oz., 7/6, 4-oz., 14/-; 1-pints, 21/-, pints, 42/-; quarts, 84/- per doz.

WICKER BOTTLES.

The second largest sale amongst Chemists in the U.K.

Sole Agents—**OSCAR MOENICH & CO., 8 COLEMAN STREET, LONDON, E.C.**



SACCHARUM LACTIS

(SYSTEM LANGEN).

Highly recommended by authorities. The only make of perfect purity in all respects.

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BURROUGHS BROS., 66 Basinghall St., LONDON, E.C.

SPONGE IMPORTERS.

M. PETERSON & CO.

(ESTABLISHED 1870),

75 ST. ANNE STREET, LIVERPOOL.

FOR HOME, FOREIGN & COLONIAL MARKETS

56



Another CHEMIST writes:—

"Your 'Star' Preparations, especially the Suppositories, Bougies, and Kola Coca, give very great satisfaction. The demand, although now fairly strong, promises to increase largely, as two of our local doctors widely recommend them."

Terms and Wholesale Prices of the "STAR" PREPARATIONS on application to

MANAGER, CENTRAL DEPOT (for Gt. Britain and Colonies),
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MRS. WINSLOW'S SOOTHING SYRUP

FOR CHILDREN TEETHING,

Greatly facilitates the process of Teething, by softening the gums, reducing all inflammation; will allay
ALL PAIN and spasmodic action, and is

SURE TO REGULATE THE BOWELS.


Depend upon it, Mothers, it will give rest to yourselves, and

RELIEF & HEALTH TO YOUR INFANTS.

Mrs. WINSLOW'S SOOTHING SYRUP

Has been used for over Fifty Years by Millions of Mothers for their children while teething with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for diarrhoea.


BROWN'S BRONCHIAL TROCHES

 CURE COUGH, COLD, HOARSENESS, AND INFLUENZA. CURE ANY IRRITATION OR SORENESS OF THE THROAT
RELIEVE THE HACKING COUGH IN CONSUMPTION. RELIEVE BRONCHITIS, ASTHMA, AND CATARRH.
CLEAR AND GIVE STRENGTH TO THE VOICE OF SINGERS, AND ARE INDISPENSABLE TO PUBLIC SPEAKERS.
SOOTHING AND SIMPLE, CHILDREN CAN USE THEM, AS THEY ASSIST EXPECTORATIONS AND RELIEVE
HOARSENESS.

NOTICE.— Brown's Bronchial Troches are guaranteed to contain no Opium
or other Poison.

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THE MEXICAN HAIR RENEWER

 Prevents the Hair from Falling Off. Restores Grey or White Hair to its ORIGINAL COLOUR.
Being delicately perfumed, it leaves no unpleasant odour.
IS NOT a Dye, and therefore does not stain the skin, or even white linen.
Should be in every house where a HAIR RENEWER is needed.

APPLY FOR WHOLESALE TERMS TO

THE ANGLO-AMERICAN DRUG COMPANY, LIM.

33 FARRINGTON ROAD, LONDON, E.C.



THE INHALANT "SPIRONE"

TRADE MARK.

FOR THE TREATMENT AND CURE OF ALL

DISEASES OF THE LUNGS, WINDPIPE, NOSE & THROAT.

CLAIMS TO BE A

Specific for all Congestive and Inflammatory Conditions of the Respiratory Apparatus,
And will be found efficacious in

INFLUENZA, COUGHS AND COLDS, ASTHMA, BRONCHITIS,

Inflammation and Congestion of the Lungs, Pneumonia, Pleurisy, Whooping Cough, Creup, Diphtheria, Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice, Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

None Genuine except such as bear the above Trade Mark "SPIRONE" and the Signature of the Inventor upon the Bottles, on the Label over the Cork, and on the Wrapper.

Retail Price, 4s. 6d. and 11s. per Bottle. Set of Apparatus for Administration, 15s.

PAMPHLETS AND SHOWCARDS FREE ON APPLICATION.

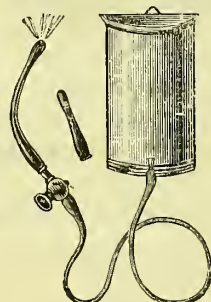
THE SPIRONE COMPANY, LIM., DEPOT- 285 REGENT STREET. LONDON, W.

HYDROSTATIC DOUCHES AND ENEMAS.

THE CHEAPEST AND BEST IN THE MARKET.

DOUCHES. REDUCED PRICES.

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|---|-----|
| No. 571A. ENEMA DOUCHE, for hanging or standing up, consisting of two-pint Bronzed Canister, fitted with 6 ft. best Black Tubing, Vulcanite Stopcock, Rectum and Vaginal Tubes to plug on, in a card box (as Fig. 571) .. | 4/- |
| No. 571. Ditto, the same, but with three-pint Canister | 4/3 |
| No. 573. Ditto, the same, but with five-pint Canister | 4/9 |
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| No. 575. Ditto, the same, but with two-pint Nickel Tin Canister | 5/9 |
| No. 576. Ditto, with three-pint Canister instead of two-pint | 6/9 |
| No. 571B. Ditto, three-pint Bronze Canister, fitted with 6 ft. Grey Tubing, Vulcanite Stopcock, and Glass Vagina Pipe (A Cheap Line) | 2/6 |
| No. 568. Ditto, Family Syringe, all Rubber, with six Vulcanite Jets | 8/9 |
| No. 570. Ditto, for Travelling, to close in hinged Bronze Case | 5/3 |

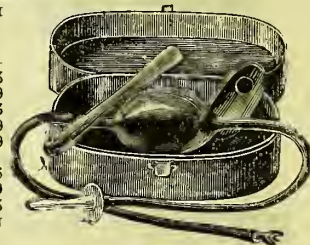
ENEMAS.

- No. 558A. Enema, seamless, in one continuous piece, without metal joints, black, red, or green, in oval leather and cloth boxes, complete as illustration.

Very best quality

30/-

All other Current Lines in Stock at very Low Prices. Subject to Discounts, which may be had on application.
Special Terms for Shippers and large quantities. Price List Post Free upon Application to



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CAN DOUCHE. No. 571. F. SCHUTZE & CO., Manufacturers, 36a Aldersgate St., London, E.C. {Telegraphic Address: "Odorators London."}

M. BAILEY & CO. MANUFACTURERS OF DRUGGISTS' SUNDRIES.

M. B. & Co. beg to call the attention of the Trade to the following articles manufactured by them:—

Glass Syringes, Nipple Shields, Breast Exhausters, Fittings for Feeding Bottles, Tubes, and Tube Work in all its branches, &c., &c.

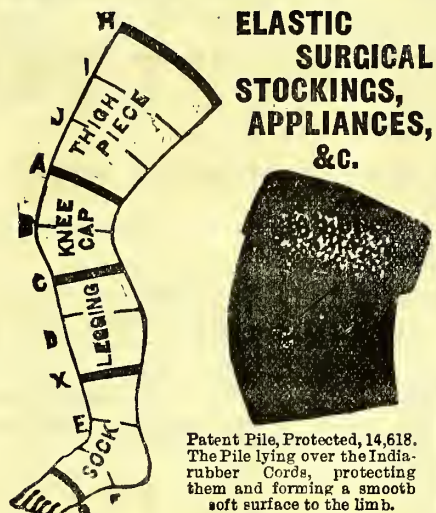
Sole Proprietors and Manufacturers of J. Brooks & Co.'s celebrated Specialities:—Winter Cream, Lip Salve, Solidified Camphor Cream, Glycerine Jelly, Perfumery, &c., &c.

Buyers are cautioned against imitations of these World-renowned preparations. None are genuine unless bearing our Registered Trade Mark.

MAY BE OBTAINED THROUGH ANY OF THE WHOLESALE HOUSES. WHOLESALE AND EXPORT ONLY FROM

M. BAILEY & CO., 32 and 34 Buckingham Road, KINGSLAND, N.

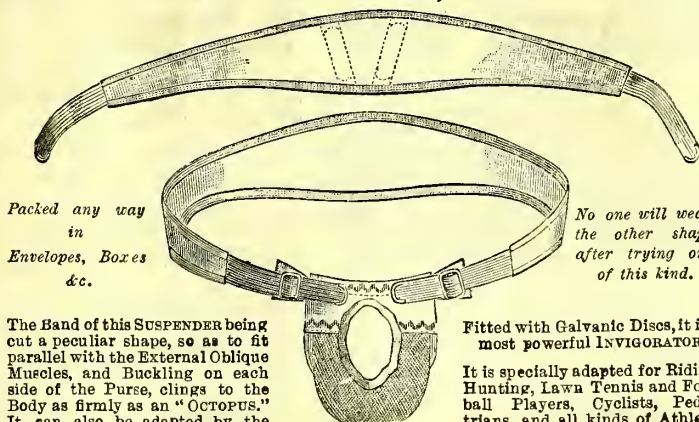




ELASTIC SURGICAL STOCKINGS, APPLIANCES, &C.

Patent Pile, Protected, 14,618.
The Pile lying over the India-
rubber Cords, protecting
them and forming a smooth
soft surface to the limb.

LATEST NOVELTY. NEW SUSPENSORY BANDAGE, THE "OCTOPUS."



Packed any way
in
Envelopes, Boxes
&c.

The Band of this SUSPENDER being
cut a peculiar shape, so as to fit
parallel with the External Oblique
Muscles, and Buckling on each
side of the Purse, clings to the
Body as firmly as an "OCTOPUS."
It can also be adapted by the
buckles to fit a wide range of sizes.

Registered. 185. 8

No one will wear
the other shape
after trying one
of this kind.

Fitted with Galvanic Discs, it is a
most powerful INVIGORATOR.

It is specially adapted for Riding,
Hunting, Lawn Tennis and Foot-
ball Players, Cyclists, Pedes-
trians, and all kinds of Athletic
Sports.

Handbook of my Manufactures will be forwarded to any Surgical Instrument Maker or Chemist free.

MAGNETIC BELTS AND APPLIANCES.

Plastic Surgical Stockings, Knee Caps, &c.
Patent Spiral Seamless Elastic Stockings, &c.
Patent Pile Surgical Elastic Stockings.
Elastic Supports for Lawn Tennis, Cricket,
Lacrosse, and other Athletic Sports.

Bath and Rubbing Gloves.
Bathing Caps and Belts.
Trusses of every description.
Poro-plastic Jackets.
Chest Expanding Braces.

Bandages—Indiarubber, Elastic, Lint, Cotton
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Horse Ear Caps and Veterinary Appliances.
Suspensory Bandages.
Ladies' and Gentlemen's Belts.

Hot Water Bottles and Covers, Respirators, Inhalers, Bronchitis Kettles, Throat Sprays, Waterproof Coats, Cloaks and Driving
Aprons, Footballs, Shin Guards, and Athletic Appliances, Druggists' Sundries, Invalid and Nursery Appliances, &c.

MANUFACTURER AND PATENTEE:—

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Veterinary Appliance Manufacturer,* **CASTLE GATE, NOTTINGHAM**
LONDON AGENT—GEORGE BARNSDALE, 44 ALDERMANBURY.

THE SURGEONS' LINT,

V.B. QUALITY.

The superior quality of **Newsome's Absorbent Surgeons' Lint** is universally admitted. The V.B. quality is quite pure and of great superficial area
and exquisite softness. The C, D, E, and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2½ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES.

Specially Bleached & Grey Carded Cotton Wools, Absorbent & Bleached & Grey Waddings; also Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

C. NEWSOME, *MANUFACTURER,* **BEEHIVE MILLS, ANCOATS, MANCHESTER.**

London Agents—B. PRATT & CO., 1 Wood Street, E.C.

Telegraphic Address—"Newsome, Ancoats, Manchester."

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"LINT LIVERPOOL."

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LIVERPOOL PATENT LINT CO.,

MARK ST. MILLS,

NETHERFIELD ROAD NORTH,

LIVERPOOL.



LINT. *MANUFACTURERS OF*
LINTS,

ABSORBENT, AND CARDED

COTTON WOOLS,

ABSORBENT OPEN WHITE, and GREY

BANDAGES,

SURGEON'S, AND CARBOLIZED

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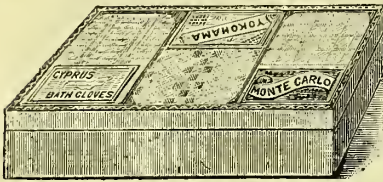
BARCLAY & SONS, LIMITED.

SUMMER SEASON, 1893.

We beg to draw the attention of our friends to the
GLASS-TOP BOXES OF ONE DOZEN PAIRS

ASSORTED BATH GLOVES

Which we figure below:—



Elegant Pink Show Cases, containing 1 doz. pairs 1/- Gloves, 5/9 each.
Maroon Calf Show Case, containing 1 doz. pairs 6/7. Gloves, 3/6 each.

The Gloves alone can be ordered to re-fill the cases at following prices:—

For 1/- Case, 5/ doz. pairs. For 6/7. Case, 2 11 doz. pairs.

CENTRAL DEPOT:—95 FARRINGTON STREET, LONDON, E.C.

We quote some other good selling lines in Bath Gloves:—

Per doz. pairs.		Per doz. single.	
3/7. Turco (3rd Qual.)	1/10	Loofah and Turco, No. 2	3/9
6/7. " bound	2/8	" " No. 1	6/-
1/- " Extra Stout	3/2	Per doz. pairs.	
1/- " Extra Stout	4/-	Ever Rough Hygienic	5/6
Calefacio, Hard or Soft	5/-	Aphrodite	5/-
	4/9	Monte Carlo	5/-

SPONGE BAGS AT EXCEEDINGLY LOW PRICES.

SPONGE BAGS. Waterproof, Check, Super—		No. 0		1		2		3		4		5		6		7		8	
Size 6x5	7x6	8x7	9x8	10x9	11x10	12x11	13x12	14x13											
Per doz. ..	2/9	4/3	5/-	5/9	7/-	8/3	10/6	14/-	16/6										
Check, No. 2	2/6	3/4	3/9	5/3	5/6	6/3	7/6	9/-	11/6										

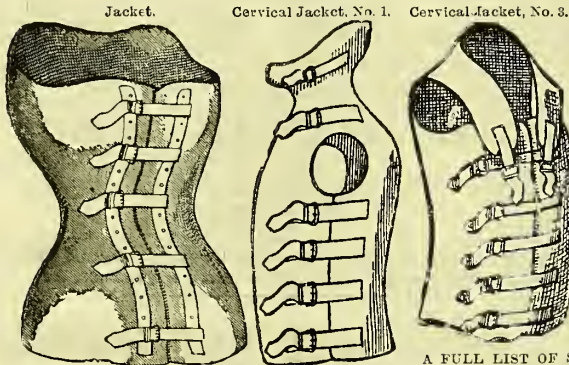
orders for any quantity will oblige.

BATHING CAPS (CIRCULAR).

Fancy Check This is really a good article. Per doz. 4/6

COCKING'S ADAPTABLE PORO-PLASTIC JACKETS AND SPLINTS.

Patentee and Sole Manufacturer, J. T. COCKING, PLYMOUTH.



JACKET

(In cases of slight deformity).

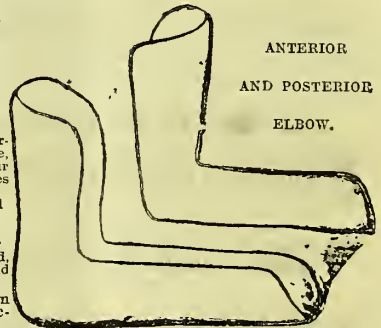
INSTRUCTIONS FOR MEASUREMENT.

Circumference at axilla.
" waist.
" hips.
Length from axilla to great trochanter.

In severe angular cases, circumference over apex of curve, position of ditto, and contour should be given; in lateral cases a description of the case. In all cases it must be stated if for male or female.

CERVICAL JACKETS.

Same measurements required, and circumference at neck, and length from neck to axilla. Any part of the Jacket can in the process of manufacture be left soft.



A FULL LIST OF SPLINTS AND PORO-PLASTIC IN SHEETS MAY BE HAD ON APPLICATION.

By Royal Letters Patent.

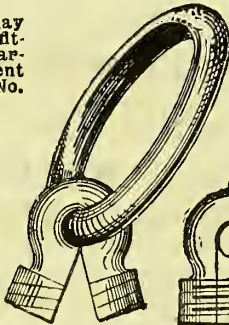


THE TEETHING PADS TO SELL.

THE "LILY" BABY COMFORTER.

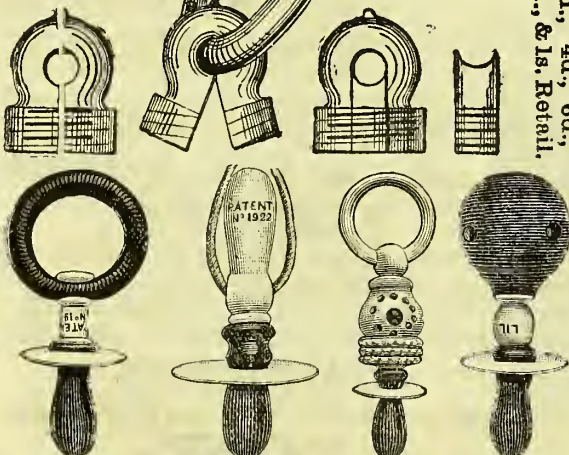
The teats are seamless, and always retain their proper shape.
THE CHILD CANNOT POSSIBLY IMBIBE AIR.

All Patterns may now be had, fitted with Marriott's New Patent Ring Socket, No. 17,135,



For inserting Bone, India-rubber, and other Rings into Teething Pads, Baby Comforters, or other articles without cutting the ring, which is guaranteed not to break.

Sd., Ad., 6d.,
9d., & 1s. Retail.

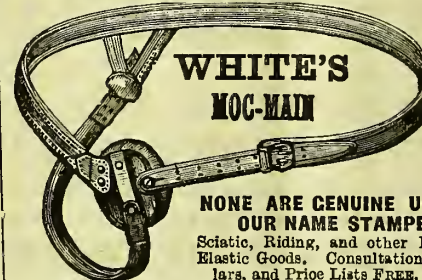


Patentees and Manufacturers, E. MARRIOTT & CO., HASTINGS

FOR OTHER PATTERNS SEE 1893 DIARY PAGE 295.

WHITE'S MOC-MAIN PATENT LEVER TRUSS

(NO STEEL IN BAND).



Highly recommended by Medical Men.

Equally comfortable in an erect or reclining position.

All our Trusses are manufactured on the Premises, and

NONE ARE GENUINE UNLESS BEARING OUR NAME STAMPED ON THEM.

Sciatic, Riding, and other Belts. All kinds of Elastic Goods, Consultations, Descriptive Circulars, and Price Lists FREE. Female attendant.

J. WHITE & CO. (1st floor), 228 Piccadilly, London, W.
Established over 56 years.

A. de St. DALMAS & Co., Leicester.

TRADE MARK.

MAKERS OF

"The Leicester"	POROUS PLASTERS	In Rubber Combination.
"The Leicester"	RIBBON PLASTERS	On FLESH-COLOUR CAMBRIC. All widths. In Tins.
"The Leicester"	SPREAD PLASTERS	All kinds.
"The Leicester"	HOSPITAL STRAPPING	On Holland or pure Calico.
"The Leicester"	WOUND & BEDSORE PADS	(Patent) with Adhesive Margin.
"The Leicester"	MENTHOL LEAVES	(Patent) in rd. and 6d. packets.
"The Leicester"	POROUS PLASTERS	ON SCARLET CANTON FLANNEL.
"The Leicester"	MUSTARD LEAVES	Thoroughly reliable.
"The Leicester"	SELVEDGE BANDAGES	Light, Porous, Elastic and Strong.
"The Leicester"	RIBBON PLASTERS	IN RUBBER COMBINATION, on handsome spools. All widths.

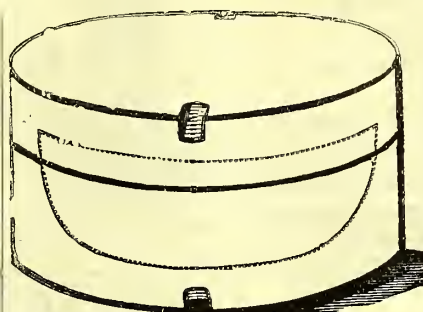
Francis' Capsicum Leaves, Francis' Bronchial Protector, &c.

May be obtained from any Wholesale House.

WILLIAM TOOGOOD.

TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

Are claimed to be the most
perfect and convenient yet offered to
the Trade.



Owing to the increasing demand
for our Patent Pots, we have in-
troduced a Special THIN Series
for Dispensing.

These Pots are beautifully
glazed and finished, and, being
very light, are specially adapted
for sending by post.

ORDINARY THICKNESS—											
1 dr.	2 dr.	1/2	3/4	1	1 1/4	2	3	4	6	ounces.	
1/6	1/6	1/6	1/8	1/10	2/-	2 3	2 10	3/6	4/6	5/6	per doz.
THIN FOR DISPENSING—											
1/7	1/9	2/-	2 1/2	2 5	3/-	4/-	5/-	6/-	8 ounces.		
									6/-	per doz.	

TOOGOOD'S BATHING CAPS. Write for New Season's List.

TOOGOOD'S SPONGE BAGS. Write for New Season's List.

TOOGOOD'S FLESH GLOVES. Write for New Season's List.

TOOGOOD'S FEEDING BOTTLES. Write for Special List.

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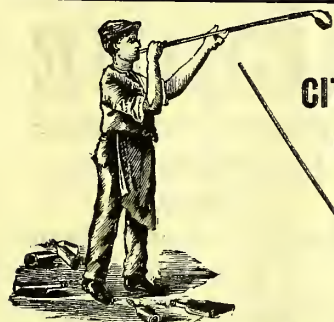
BOTTLES

Write for revised Price List of Dispensing
Bottles, &c.

SAMPLES ON APPLICATION.

Special Quotations for Large Quantities.

E. YOULDON,
EAST LONDON GLASS BOTTLE WAREHOUSE
36, 38, & 40 Great Garden Street,
WHITECHAPEL. LONDON, E.



DISPENSING
CITRATE
FEEDING
OIL &
SAUCE

STOPPERED
AND
BOTTLES
PLAIN.

LIMES
KALIS
POMADES
PERFUMES

GREAT VARIETY FOR SPECIALITIES.

JOHNSEN & JÖRGENSEN.

Offices & Showroom—5 SAVAGE GARDENS, TOWER HILL, LONDON, E.C.

WAREHOUSE—WEST INDIA IMPORT DOCK, E.

GLASS BOTTLES

GOOD AND CHEAP.

From Stock
in London or
direct from
the works.

THE NEW SHAPE FLATS.

With rounded edges, or the ordinary kind, plain or graduated.

3 and 4 ounces 8/- per gross.
6 and 8 " 9/- "

WHITE MOULDED PHIALS.

1 oz. .. 1 oz. .. 1 1/2 oz. .. 2 oz.
3/6 .. 3/9 .. 4/6 .. 5/3 per gross.

PANEL BOTTLES.

2 oz. .. 4 oz. .. 6 oz. .. 8 oz.
7/- .. 8/- .. 9/- .. 9/- per gross.

SPECIAL NOTICE.—Six gross and upwards of assorted sizes sent Carriage Free to any part of England. Smaller quantities not carriage paid. Sample Bottle sent free on application.

ISAACS & CO., GLASS BOTTLE MANUFACTURERS,
25 Francis St., Tottenham Court Road, LONDON, W.C.
Established 50 Years. Bankers—London and Westminster Bank.

TURNED WOOD BOXES, BOTTLE CAPS,

AND
ALL KINDS OF TURNERY

MAXIME & CO.

General Wood & Bone Turners.

WAREHOUSES & OFFICES:

150 OLD STREET,
London, E.C.

FACTORIES AND SAW MILLS, LARGEST IN THE WORLD.
At Gothenburg, SWEDEN, and Boulogne-sur-Mer, FRANCE.
Any Special Articles made to order.

MAYFARTH'S PRESSES,



For pressing JUICES, TINCTURES, and other substances, are the best for MANUFACTURING CHEMISTS and others. They are strongly constructed, and are unrivalled for SIMPLICITY and CONVENIENCE.

Price List and Full Particulars on application to

PH. MAYFARTH & CO.,
16 MINCING LANE, LONDON, E.C.

TANGYES' GAS ENGINE

'OTTO' PRINCIPLE. PINKNEY'S PATENTS

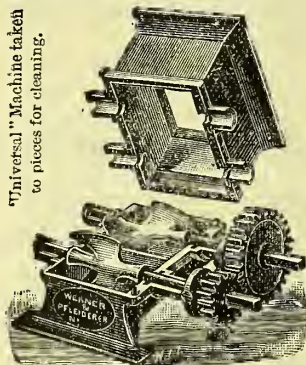
SINGLE ENGINES OF ALL SIZES FROM

1/4 TO 146 ACTUAL OR 170 INDICATED HORSE-POWER

APPLY FOR ILLUSTRATED CATALOGUE TO

TANGYES LIMITED, BIRMINGHAM

London, Newcastle, Manchester, Glasgow, Sydney, Melbourne
Johannesburg, Genoa, Bilbao, and Rotterdam.



"Universal" Machine taken to pieces for cleaning.

Size 3, Type I., for 1-lb. Mass.

THE "UNIVERSAL"

Kneading & Mixing Machine,

Used by all the largest Pill Makers.

SUITABLE ALSO FOR

POWDERMENTS, POWDERS,
AND MASSES
of any
Consistency.

PILL MASSING MACHINES.

PILL
PIPERS,

CUTTERS,

ROUNDERS, COATERS,

"SPIRAL BRUSH"

POWDER-SIFTERS

(WITH INTERCHANGEABLE SIEVES),

And every Accessory for the Pill Room.

WERNER & PFLEIDERER, 117 Queen Victoria St., E.C.

Contractors to the War Offices of all the Great Powers and other Governments.

NEW CAPSULING MACHINE

The only Machine
which leaves no crease
or pleat on the
Capsule.



Can be fixed to any
Counter.
A single pull of the lever
is sufficient
to fix the Capsule.

Patentee—**C. MELIN, 37 Crutched Friars, LONDON, E.C.**

JEYES' FLUID

THE NON-POISONOUS DISINFECTANT.

A TRUE GERMICIDE & DEODORISER,

Somewhat less refined than **CREOLIN**, the virtues of which are
RECOGNISED BY MEDICAL AUTHORITIES ALL OVER THE WORLD.

Jeyes' Fluid and its Preparations

SHOULD BE RECOMMENDED BY THE CHEMIST EVERYWHERE WHO DESIRES TO SUPPLY ONLY RELIABLE ARTICLES.

PRICE LIST

(ABBREVIATED).

Jeyes' Fluid.

Retail Prices.		Trade Prices.
s. d.		s. d.
0 6 ..	Sixpenny Bottles } (bottles included)	4 0 per doz.
1 0 ..	Shilling ..	7 0 ..
3 6 ..	3-gall. Iron Drums (drums included) ..	2 6 each
6 0 ..	1-gall. Drums ..	4 6 ..
11 6 ..	2-gall. " ..	8 6 ..
22 6 ..	5-gall. " ..	20 0 ..
55 0 ..	10-gall. " ..	38 6 ..
Per gall.		
5 0 ..	20 and 40 gall. Casks (casks free, not returnable)	3 6 per gall.
1 1½ ..	UNIVERSAL PERFECT PURIFIER (in bottles) ..	8 6 per doz.

Sanitary Powder.

1 0 each	Canisters, in boxes of 1, 2, or 3 doz. ..	7 0 per doz.
0 6 ..	" ..	4 0 ..
	(Also in Casks and Bags.)	

Disinfectant (Brown) Soap or Household (White) Soap.

No. 1 QUALITY.—(In 1-lb. Bars, papered.)

Per cwt.		
31 6 ..	In 1-cwt. Boxes ..	28 0 per cwt.
	(Also in Small Packages.)	

No. 2 QUALITY.

Retail Prices.		Trade Prices.
s. d.		s. d.
25 6 ..	In 1-cwt. Boxes ..	22 0 per cwt.
	(Also in Small Packages.)	

Triple Milled Toilet Soaps.

Elegant Tablets for the Toilet, of finest quality, containing the Antiseptic Properties of "Jeyes' Fluid."

Per box.		
1 6 ..	Perfect Purifier, in Boxes of 6 Tablets ..	1 0 per box.
1 6 ..	Osal Tar, per Box of 6 Tablets ..	1 0 ..
2 0 ..	Old Brown Windsor, in Boxes of 12 Tablets ..	1 6 ..
2 6 ..	Toilet (Scented), in Boxes containing 6 Tablets ..	1 9 ..
2 6 ..	Sublime Toilet (Unscented) in Boxes of 6 Tablets ..	1 9 ..
3 0 ..	Sublime Toilet (Scented) ..	2 0 ..
2 0 ..	Boudoir Tablets (Perfumed), in Boxes of 3 Tablets ..	1 4 ..
5 0 ..	Transparent, Complexion, in Boxes of 12 Tablets ..	3 0 ..

Toilet Preparations.

1 0 each	Tooth Powder, in Metal Boxes ..	7 0 per doz.
1 0 ..	" Soap, ..	7 0 ..
2 0 ..	Dentifrice Water, in Bottles, with Sprinkler ..	15 0 ..
3 6 ..	Spray Diffuser, in Box complete ..	30 0 ..

Sheep Dip, Wood Preserver, and other Agricultural Preparations.

TERMS, 2½ PER CENT. DISCOUNT AT ONE MONTH.

All Goods delivered Free in London. For the Country, Free at any London Railway Station or Wharf.

FULL PRICE LIST ON APPLICATION.

ALSO

A NEW MEDICAL PAMPHLET,

With Recent Opinions of English Medical Men, free on request.

JEYES' SANITARY COMPOUNDS CO. Ltd.
43 CANNON STREET, LONDON, E.C.



CARBO-EUCALYPTINE

VOLATILE AIR-PURIFYING

SANITARY TABLETS.

Supplied to the Houses of Parliament, Hospitals, Hotels, Railway Companies, Board Schools, Shipping, &c., &c.

From S. J. COURTNEY PAIN, *Medical Officer in Charge, GAILKORA, BENGAL, June 19, 1892*:-
 "I have found the Carbo-Eucalyptine Sanitary Tablets of great value in my Cholera Camp. Please send at once a six months' supply for our Hospital here," &c., &c., innumerable.

A Sample Dozen 3/6 (Parcel Post), Showcard, &c.,
 For Cash with Order, or £2 a Gross, from all Chemists' Sundrymen, or the
EUREKA MANUFACTURING COMPANY, CLAPTON PARK, LONDON.

Especially put up for India and Tropics, and minus price.
 AVERAGE RETAILER'S SALES 4-GROSS WEEKLY.



DUSSEK BROS. & CO.'S

SOLUBLE SANITARY FLUID (MILKY),

CARBOLIC ACIDS & POWDERS

Of all strengths, in various packages for the Trade and for Export.

Also Sheep Dip, Tar and Rosin Products, Dubbin, Greases, Creosote, Brunswick Black, &c.

DUSSEK'S WHARF, VERNEY ROAD, S.E.

TELEPHONE No. 4833.

TELEGRAMS—"DUSSEK LONDON."

MACKEY, MACKEY & CO.'S

EUCALYPTOL

DISINFECTANTS

MEDALS—Cape Town, 1877; Brighton, 1881; Cork, 1883; Dublin, 1884; International Inventions Exhibition, 1885.

GOLD MEDAL—International Health Exhibition, 1884.

EUCALYPTOL ESSENCE, for internal use in Bronchitis, Influenza, &c. In bottles 2/- each. Spray 2/- extra.

EUCALYPTOL DISINFECTING FLUID, for Drains, Sick-rooms, &c. In 1/- and 2/- bottles. In 1-gallon cans, cans included, at 5/- per gallon.

EUCALYPTOL DISINFECTING POWDER, for Sprinkling about Sick-rooms, &c. In 1/- tins. In 1-cwt., 1/2-cwt., and 1-cwt. packages, packages extra, at 10/6 per cwt.

EUCALYPTOL CLEANSING FLUID, for Laundry Use. In 1/- and 2/- bottles. In 1-gallon cans, cans included, at 5/- per gallon.

EUCALYPTOL CLEANSING POWDER, for Cleaning Stairs, Floors, Benches, &c., no soap or soda being required. In 1/- tins. In 1-cwt., 1/2-cwt., and 1-cwt. packages, at 18/- per cwt. Packages extra.

EUCALYPTOL & PINE WOOD OZONISER. In 1/- tins.

KRESYLINE DISINFECTING FLUID (Soluble Creosote). In 6d., 1/-, and 2/- bottles. In 1-gal. cans, cans included, at 4/- per gal.

CARBOLIC ACID (Black), for Sewage Disinfection.

CARBOLIC ACID No. 5 (Light Brown). In 1-gallon cans, cans included. 4/- per gallon.

CARBOLIC POWDER 15%. In 1/- tins. In 1/2-cwt., 1-cwt., and 1-cwt. packages, packages extra, at 6/6 per cwt.

SPECIAL QUOTATIONS FOR QUANTITY.

MACKEY, MACKEY & CO.

1 & 2 BOUVERIE STREET, FLEET ST E.C.

64

The Sanitary Institute of Great Britain has always given the Highest Awards, when tested against other so-called Disinfectants, to

CALVERT'S No. 5 CARBOLIC

Which is of the quality adopted as "Standard" by the British and German Governments after bacteriological tests. Unscrupulous statements that other disinfectants are superior to genuine Carbolic Acid should be treated with the distrust they deserve.

The Chemist and Druggist, July 30th, 1892, says:—"Although the superiority of Carbolic Acid as a Disinfectant has frequently been challenged, there is no doubt that it continues to hold the first place in public favour."

Price Lists, Showcards, and Counter Bills on application to

F. C. CALVERT & CO., MANCHESTER.

Awarded 60 Gold and Silver Medals and Diplomas.

WHOLESALE & EXPORT orders for

MASON'S

PERFUMED SOLUTION OF

CARBOLIC ACID

Should be addressed to

C. E. MASON & Co., 2 Beech St., LONDON, E.C.

TERMS UPON APPLICATION.

KANGAROO EUCALYPTUS OIL

25-lb. Tins.

KANGAROO



TRADE MARK.

25-lb. Tins.

BRAND.

Is admitted to be the Purest Eucalyptus Oil yet introduced to the public.
To be obtained of your Wholesale Druggist.

SOLE CONSIGNEES—LAUGHLAND, MACKAY & BAKER, 50 Lime St., LONDON.

COLONIAL ADDRESS—A. M. BICKFORD & SONS, WHOLESALE DRUGGISTS, 46 CURRIE STREET ADELAIDE.

LUNGILI.

A New Drug for Dysentery
and Diarrhœa.

This Drug was discovered a few years ago by Mr. A. H. G. Pigg, when exploring in Eastern Africa. It was originally obtained from a native Wise Man or Doctor, and was the cause of curing many obstinate cases of Dysentery. It consists of the powdered bark of a tree supposed to be hitherto unknown to science.

Price, 4/6 per Bottle.

Testimonial from Mr. C. A. MOREING, M.Inst.C.E.,

BROAD STREET HOUSE, LONDON, E.C.

GENTLEMEN,—I have much pleasure in telling you that I have taken the Lungili" you so kindly sent me, and it appears to have completely cured, me. I have been suffering four years from Dysentery, the result of malaria fever caught in Africa, and no doctors were able to do me any permanent good by the ordinary remedies.

Yours truly,

C. ALGERNON MOREING.

THE "LUNGILI" COMPANY,

35 LUDGATE HILL, BIRMINGHAM;

or of Wholesale Druggists, EVANS, SONS & CO., Liverpool,
and EVANS, LESCHER & WEBB, London.

TASMANIAN EUCALYPTUS OIL COMPANY.

REGISTERED
TRADE MARK



Obtained
First Award
and
Gold Medal

1891-92.

at the
Tasmanian
Exhibition.

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OIL OF EUCALYPTUS GLOBULUS

From the Native "Blue Gum" Tree of Tasmania.
Pure, fragrant, and of highest medicinal value, as shown by H. Helbing,
F.C.S., and Dr. Passmore.

3d. Samples (2/- per dozen) and in Bottles for Retailing
at 1/-, 2/6, 4/6. Also in 1-lb. Bottles, for Dispensing.

EUCALYPTUS PASTILLES.

HIGH-CLASS EUCALYPTUS SOAP

OF ALL WHOLESALE HOUSES.

For samples and Helbing's Pharmacological Record, write to the
London Offices—138 Leadenhall St., E.C.

TELEGRAPHIC ADDRESS—"EUCALYPTUS LONDON."

GRINDLEY'S

"PIONEER" BRAND

SANITARY FLUID

(SOLUBLE CARBOLIC).

THE BEST AND CHEAPEST DISINFECTANT & CLEANSER.

Pale Liquid Carbolic Acid, 97%. Dark Crude Carbolic Acid, 25%, 30%, and 50%. 5%, 10%, and 15% Pink Carbolic Powders.

QUALITY GUARANTEED.

SAMPLES AND PRICES ON APPLICATION TO

GRINDLEY & CO., LTD.
TAR AND ROSIN DISTILLERS,
POPLAR, LONDON, E.

WILEY'S

CHEMICAL

ESSENCE

FOR

LAMENESS in HORSES

*A Genuine Remedy. Brings credit to
all who sell it.*

50 YEARS' UNBROKEN SUCCESS

SOLE MAKER AND PROPRIETOR,

FRANCIS E. ROOKLEDGE, CHEMIST,
EASINGWOLD, YORK.

TO BE HAD OF USUAL WHOLESALE HOUSES.

66

LONG'S

MAGGOT LOTION

OR

FLY OIL.

Celebrated for the certain destruction of Maggots
and healing Wounds on Sheep and other animals,
without loss of wool or injury to the animals.

In Bottles, 1s. and 2s. each, of all Agricultural Chemists.

WHOLESALE FROM THE MANUFACTURERS.

CORRY & CO., LIM., 16 Finsbury St., LONDON.

PARAFFINUM MOLLE, B.P.

ABSOLUTELY FREE FROM ALKALI
ABSOLUTELY FREE FROM ACID

HAS NOW STOOD THE
TEST OF YEARS,
AND
ESTABLISHED
ITSELF
AS

PETROLINA
MANUFACTURED IN AMERICA.
best,
The purest
The leading,
& The cheapest
Petroleum Jelly
Supplied by all
Wholesalers. In Casks of 3 cwt.
In Kegs of 1 cwt., $\frac{1}{2}$ cwt., and $\frac{1}{4}$ cwt.
In Tins of 14 lbs., 6 lbs., and 1 lb.
In bottles (without Labels) of 2 oz. and 4 oz.

**BINCHAMTON OIL REFINING CO., NEW
YORK STATE, U.S.A.**

London Agency—3 COLEMAN ST., E.O.



I WILL pay £5 to the first person, whether Chemist, Assistant, or one of the Public, who will afford me such information (which I engage to treat as absolutely confidential) as shall lead to the conviction of anyone who improperly substitutes other Powder for mine. I call attention to the case below.

As a matter of fact, I took this course last year, and in the end the reward and heavy costs came out of the substituter's pocket; and I have every reason to believe that the course I adopted was highly satisfactory to the neighbouring Chemists, as well as to the Public and myself.

THOMAS KEATING,
12, BRIDE LANE, LONDON.

A "STORES" CAUGHT!

MR. JUSTICE STIRLING.—October 30, 1891.

KEATING v. KIBBLE.

THE Defendants are Proprietors of large Stores at Deptford, and when asked for "Keating's Powder," sold by their shopmen an article not made by me. The Defendants denied that this was done with their knowledge, and this may be conceded, but it cost them over £40, although in this instance I pressed my Solicitors to be as considerate to them as possible. The Court ordered the Defendants to pay the whole costs of the action, and issued an injunction restraining them from offering for sale any preparation other than that prepared by Thomas Keating under the name of "Keating's Insect Powder."

HEAVY DAMAGES.

Chancery Division—MR. JUSTICE NORTH—October 26, 1886.

KEATING v. POLL.

IT WAS ORDERED—

That the Defendant be perpetually restrained from stating or causing to be stated that Keating's Persian Insect Destroying Powder contains any substance poisonous to animals or human beings, or from making any statement to the effect that such Powder is dangerous to animals or human beings.

IT WAS FURTHER ORDERED—

That the Defendant, William Sheppard Poll, do pay to the Plaintiffs their costs of this action.

ELKANAH NATALI,

SHOPFITTER and GLASS SHOW-CASE MAKER,

Removed to more Extensive Premises.

242 OLD ST. (only address),

Twelve doors from City Road, nearly opposite the old place.
A Large Stock of New and Second-hand Cases, &c., always in hand. No connection with any other house of the same name.
ESTABLISHED ABOUT QUARTER CENTURY.

HUDSON'S HALF-MINUTE THERMOMETER,
Inland Post Free, 3/6.CLINICAL THERMOMETERS IN CASES
25/- per dozen. Trade Discount.

For Medical Press Opinions apply

HUDSON & CO.OPTICIANS, PATENTEES, AND MANUFACTURERS,
5 Crosby Square, LONDON, E.C.**S.V.R.**

In 40-gallon returnable iron casks, pure tinned, with screw bungs, interchangeable brass taps and spanners for opening. Farina, Dextrine, Glucose, Alcohol absolut., Fusel Oil, Pear Oil, Lime-Seda- Lead-Acetates, Verdigris, Acetic Acid, Wood Naphtha, Charcoal, Ammonia liquid 880-900, anhydrous Sodium Sulphide, Bromides, Iodides, Chloralhydrate, Boracic Acid, Sulphate of Copper, Permanganate of Potash, Ol. Caryophylli, Menth. Pip., Pini, Juniperi.

HUGO LORENZ, 7, 8 Idol Lane, LONDON, E.C.

See also page 114, March 18 issue.

ESTABLISHED 1835.

DENTISTRY

Best Mechanical work from impressions or models. Care and promptitude may be relied on. Moderate charges, inclusive of materials.

FENTIMAN & CO., DENTISTS, 2 Upper East Smithfield,
adjoining Royal Mint, London.
The above is the only Address.**GEORGE HAYNES & CO.**

Hampstead Cotton Mills, Stockport,

MANUFACTURERS OF

BLEACHED & ABSORBENT COTTON WOOLS

GREY WOOL, COLOURED WOOLS, & JEWELLERS' SHEETS.

THREE GOLD MEDALS, TWO SILVER MEDALS, AND DIPLOMA OF HONOUR
The Highest Awards given to any Cotton Wool Manufacturers.

Telegraphic Address—"HAYNES STOCKPORT."

ORANGE WINE

(VIN. AURANT, P.B.).

Specially brewed for Quinine Wine. Does not deposit, will keep good in any climate. In casks, 13 gallons to 140 gallons; small casks, 3s. 8d. per gallon, carriage allowed if paid within three months. In wine-bottles (not less than 3 doz.), at 9s. per doz., bottles included. Casks and cases extra, and returnable.

Sample on application. Special quotations to large buyers.

DURRANT & CO., Railway St., HERTFORD.**PUREST CHLOROFORM**

Guaranteed free from all injurious impurities. The Purest in the World.

SEND FOR ANALYSIS AND TESTIMONIALS.

SALAMON & CO., LD., CHEMICAL MANUFACTURERS,
RAINHAM, ESSEX.

Contractors to Her Majesty's British and Indian Governments.

FLETCHER'S PINO-PHENOL PURIFIER.

Dr. Wm. Collingridge, M.A., M.D., LL.M., the Eminent Medical Officer of Health for the Port of London, writes:—"I have examined your Pino-Phenol Purifier and have tested it practically. It is an excellent preparation diluted to about 1 in 100, it is a valuable fluid for purifying and sweetening Drains, Closets, Cesspools, &c., and has a marked effect upon decomposing animal and vegetable substances. It is a powerful antiseptic, and has, moreover, a pleasant odour."

Special Terms to Sanitary Authorities and other large Consumers.
Sole Manufacturers—FLETCHER BROS. & CO., GRIMSBY.

PRECIPITATED CHALK, WHITEST AND PUREST.

CHEAPEST SELLERS IN THE MARKET.

ALSO CHEMICALS, DRUGS, AND OILS.

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AUG. LEVERMORE & CO., 8 LIME STREET, LONDON, E.C.**FREDK. FINK & CO.**

10 & 11 MINGING LANE, LONDON, E.C. [1]

SPECIALITIES: Glycerine—Gum Arabic—
Gum Tragacanth—Pure Beeswax—Honey.

RAYBOULD'S FURNITURE POLISH

BRIGHTENS FURNITURE WITH LITTLE LABOUR.

In Tins—1d., 7/- gross. Stone Bottles—1d., 8/- gross; 3d., 2/- dozen; 6d., 4/- dozen; 1s., 7/- dozen. It is sure to please and increase your trade.
Every Chemist should send for Sample order, 6 dozen assorted as required, Carriage Paid, P.O.O. or Cheque, payable to

FLESHER RAYBOULD, REFORM WORKS, DUDLEY.**Bromley's Gout & Rheumatic Pills** Estab. 1807. **WILL CURE.**

FREE Printing of Chemists' own Circulars.

READ DIARY, PAGE 406.

Voted 5th out of 500 representative firms' announcements as most useful and profitable.

Awaiting your esteemed reply to-day. Send also copy for Handbills or Labels.

SIR THOMAS'S BUILDINGS, LIVERPOOL, ENGLAND.

CHEAPEST.

Retail Profit

at 1 on £8.

Full retail

prices absolutely

guaranteed.

EADE'S**GOUT and RHEUMATIC PILLS**

Are the safest and most effectual remedy advertised for

GOUT, RHEUMATISM, AND ALL MUSCULAE PAINS.**GEORGE EADE, 72 GOSWELL RD., E.C.**

Counter Bills and Show Cards on application.

GONORRHOEA BAGS**HARTMANN'S**

PATENT WOOD WOOL.

16/- per gross, in boxes of 1 doz.

Of any Wholesale House, or from

THE SANITARY WOOD WOOL CO. (LIMITED), 26 THAVIES INN, LONDON, E.C.

These Bags are made of Hartmann's

Patent Wood Wool and Sublimate

Gauze; they are thoroughly antiseptic

and absorbent; no soiled linen. Simply

burnt after use. [1]

BLAUD'S PILLS (Best Quality, Soluble Coating).

10-gross Tins, carriage paid, for 4/6. Cash with order.

7-lb Tins (56 gross), carriage paid, for 21/-. Cash with order.

COMP. SULPH. LOZ. (Garrod's Formula) & TABLETS.

4 lbs., carriage paid, for 4/-. Cash with order.

7 lbs., carriage paid, for 6/6. Cash with order.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

JAMES N. DAVIDSON & GRAY, CHEMISTS, DUNDEE.**COFFEE.****THE "ORIGINAL CANISTER" & ROASTED COFFEES**

These Coffees have been before the Public for nearly 50 years,
and are the very best of their kind.

WHITE, FAIRCHILD & CO., 30 St. Tower St., E.C.

ESTABLISHED 1847. AGENTS WANTED.

BLAIR'S GOUT & RHEUMATIC PILLS

Cure Gout, Rheumatism, Sciatica, Lumbago, Neuralgia.

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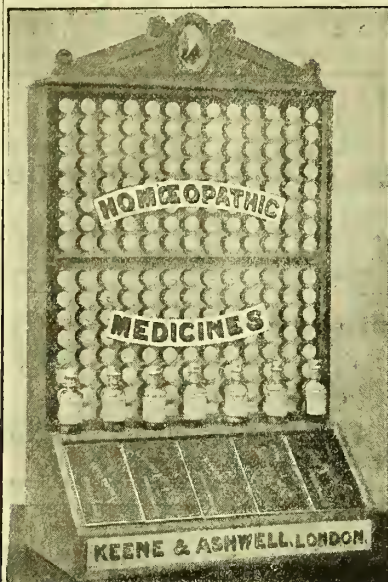
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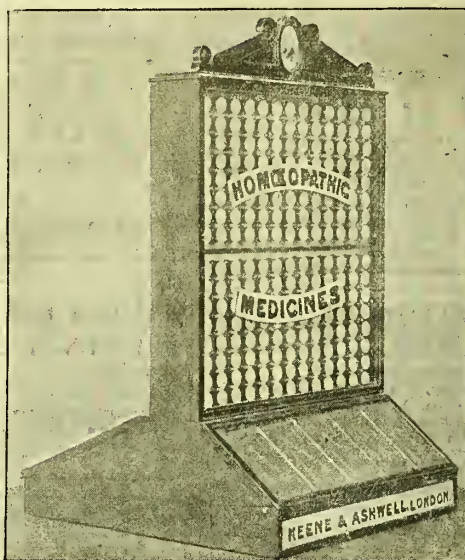
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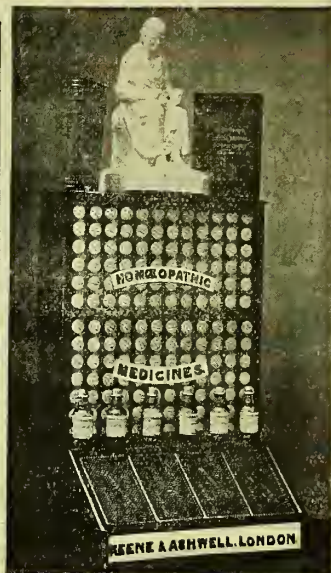
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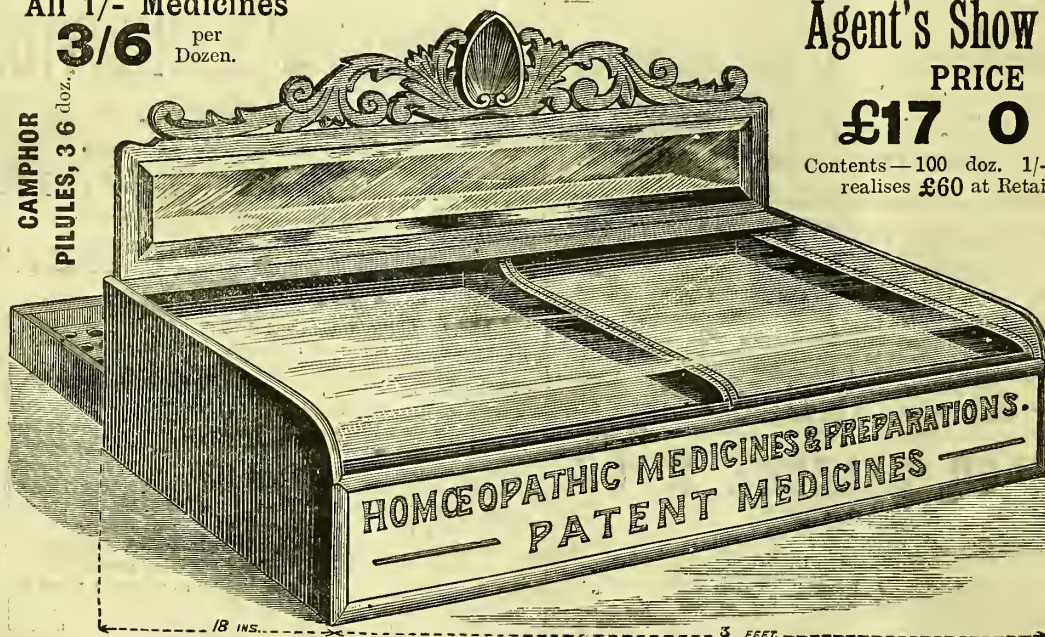
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